Dräger Medical
Information Technologies

Dräger

Saturn
User's
Guide

Part Number: 4115608-003
Rev. A
Date: 21 June 2002
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Recorder

Software Version 4

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Introducing Recorder

This section introduces you to the Recorder application.

1 | Introducing Recorder

Operator's Responsibility for Patient Safety

Draeger Medical, Inc. anesthesia products are designed to provide the greatest degree of patient safety that is practically and technologically feasible. The design of the equipment, the accompanying literature, and the labeling on the equipment are restricted to trained professionals, and certain inherent characteristics of the equipment are known to the trained operator. Instructions, warnings, and caution statements are limited, therefore, to the specifics of the Draeger Medical, Inc. design. This publication excludes references to hazards that are obvious to a medical professional, to the consequences of product misuse, and to potentially adverse effects in patients with abnormal conditions. Product modification or misuse can be dangerous. Draeger Medical, Inc. disclaims all liability for the consequences of product alterations or modifications, as well as for the consequences that might result from the combination of Draeger Medical, Inc. products with products supplied by other manufacturers if such a combination is not endorsed by Draeger Medical, Inc.

The operator of the anesthesia system must recognize that the means of monitoring and discovering hazardous conditions are specific to the composition of the system and the various components of the system. It is the operator, and not the various manufacturers or suppliers of components, who has control over the final composition and arrangement of the anesthesia system used in the operating room. Therefore, the responsibility for choosing the appropriate safety monitoring devices rests with the operator and user of the equipment.

Patient safety may be achieved through a variety of different means depending on the institutional procedures, the preference of the operator, and the application of the system. These means range from electronic surveillance of equipment performance and patient condition to simple, direct contact between operator and patient (direct observation of clinical signs). The responsibility for the selection of the best level of patient monitoring belongs solely to the equipment operator. To this extent, the manufacturer, Draeger Medical, Inc., disclaims responsibility for the adequacy of the monitoring package selected for use with the anesthesia system. However, Draeger Medical, Inc. is available for consultation to discuss monitoring options for different applications.

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Limitation of Liability

Draeger Medical, Inc.'s liability, whether arising from or related to the manufacture and sale of the products, their installation, demonstration, sales representation, use, performance, or otherwise, including any liability based upon Draeger Medical, Inc.'s product warranty, is subject to and limited to the exclusive terms of Draeger Medical, Inc.'s limited warranty, whether based upon breach of warranty or any other cause of action whatsoever, regardless of any fault attributable to Draeger Medical, Inc. and regardless of the form of action (including, without limitation, breach of warranty, negligence, strict liability, or otherwise).

Draeger shall in no event be liable for any special, incidental, or consequential damages (including loss of profits) whether or not foreseeable and even if Draeger Medical, Inc. has been advised of the possibility of such loss or damage. Draeger Medical, Inc. disclaims any liability arising from a combination of its product with products from another manufacturer if the combination has not been endorsed by Draeger Medical, Inc. The Buyer understands that the remedies noted above are its sole and exclusive remedies.

Furthermore, the buyer acknowledges that the consideration for the products, equipment, and parts sold reflects the allocation of risk and the limitations of liability referenced herein.

Caution: Although the Saturn Clinical Workstation is designed to minimize the effects of ambient radio-frequency interference, workstation functions may be adversely affected by the operation of electrosurgical equipment or short-wave or microwave diathermy equipment in the vicinity.

Warning: When moving the anesthesia machine equipped with the Saturn Information System, remove all monitors and equipment from the top shelf and the sides of the anesthesia machine, remove the absorber system, set the Saturn display to its lowest position, secure all attachments close to the center of the machine, and use only the machine handles or push/pull bars. The anesthesia machine should only be moved by people who are physically capable of handling its weight. Draeger Medical, Inc. recommends that two people move the anesthesia machine to aid in maneuverability. Exercise special care so that the machine does not tip when moving up or down inclines, around corners, and across thresholds (for example, in door frames and elevators). Do not attempt to pull the machine over any hoses, cords, or other obstacles on the floor. For more information, please refer to the operator's manual for the anesthesia machine.

Restriction

Federal law restricts this device to sale by, or on the order of, a physician.

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Symbol Definition

The following symbols appear on the labeling on the back of the Saturn Clinical Workstation.

DANGER: Possible explosion hazard if used in the presence of flammable anesthetics.

DANGER: Risque d'explosion ne pas employer en presence d'anesthesiques inflammables.

CAUTION: Risk of electrical shock. Do not remove cover. Refer servicing to qualified service personnel.

ATTENTION: Danger d'electrocution, ne pas enlever le couvercle. Acune reparation ne doit etre entreprise par une personne nonqualifiee.

CAUTION: Before use, consult operator's instruction manual.

ATTENTION: Consulter le manuel d'operations avant la mise en marche.

CAUTION: Degree of protection against electric shock: Class 1, Type B.

ATTENTION: Protection contre le risque de choc electrique: Classe 1, Type B.

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What Is Recorder?

Recorder® is a software application for the anesthesia clinician to use in documenting the perioperative anesthesia process. The program provides easy data entry and access, as well as a means to record and store data collected automatically throughout the process. Automatically collected data and manually entered data can be edited for a period of time that is configured by your system administrator.

Note: It is your system administrator's responsibility to establish the level of security and training to ensure the authenticity, integrity, and confidentiality of the electronic records.

A Windows NT and Windows 2000 Application

Recorder operates on personal computers under the Microsoft® Windows NT® and Windows 2000® operating systems. Clinicians who have experience using either Windows NT, Windows 95®, or Windows 2000 will find that the application works like any other Windows-based application. Users with Windows experience will also find many familiar Windows features in the Recorder interface.

Part of the Saturn Information System

Recorder is part of the larger Saturn Information System (hereafter referred to as "Saturn"), which includes the List Manager, Environment Manager, Report Manager, and Case Manager applications. You do not have to be concerned about the other applications while you are using Recorder. They operate behind the scenes as you interact with Recorder.

List Manager

Your system administrator uses List Manager to create and tailor the lists you use in Recorder, such as lists of drugs, events, procedures, and surgeons. List Manager also enables your system administrator to create sublists that group the list items into clearly defined categories (e.g., sublists for the Drugs list could be "Narcotics," "Reversal," "Induction," and "Cardiac").

Environment Manager

Environment Manager is an optional Saturn program that enables you to configure Recorder options and save them as an "environment" using a unique name (i.e., your name or a type of surgical procedure). When an environment is selected while Recorder is running, Recorder reads and uses that environment's configuration options for that session. The configuration options consist of templates (sublists of drugs, events, fluids, gases, vitals, charges, and labs), default items placed on the record, and view settings.

Report Manager

Your Saturn Administrator uses Report Manager to generate standard reports for time studies, drug studies, and quantitative studies. Each study generates reports for specific periods of time. The reports can be printed or saved to a report template file.

Case Manager

Your Saturn Administrator uses Case Manager to archive, delete, restore and purge patient case files that are created in the Saturn Recorder program.

What's New in Recorder

The following section summarizes the new features released with various versions of Saturn Recorder.

Saturn Version 4.1

The following changes apply to Saturn Version 4.1:

Windows 2000
In addition to Windows NT, Recorder now operates on personal computers under the Microsoft Windows 2000 operating system.

Incomplete Entries Removed
Incomplete data entries (except for STAT entries) are removed from a case when you close it. See Section 19.

Event Summary Reports
Event reports now include a column that lists staff electronic signatures for events, as well as the time the signatures were entered. See Section 20.

Saturn Version 4.0

The following changes apply to Saturn Version 4.0:

CCOW Patient Context Manager
This feature creates a common patient context that allows several applications to work collaboratively. A patient's record can be accessed in other CCOW-enabled programs, allowing hospital staff to "see" the patient's entire hospital history by viewing the patient's records in different programs. See Section 18.

Opening Cases
Selecting and opening cases is now made easier. Several date range options have been provided, such as Calendar 1st, 2nd, 3rd, and 4th Quarters, Last Full Week, Year to Date, etc. In addition, a Custom option allows you to enter any date ranges that fall outside of these options. Procedures for opening a new case, opening an existing case, and opening several cases at a time have been added. See Section 4.

Automatic Sign-In
Any staff with a valid user name and password can automatically sign in to an open case when logging on. See Section 2.

Remarks
Remarks (up to 2,048 characters) can be added to drug and fluid/gas entries. Remarks made to these data entries will display a triangle icon in the entry cell on the chart grid. See Section 2.

History of Present Illness (HPI Tab)
The HPI page allows you to enter up to 4,000 characters of free-form text in the Pre-Op section. An HPI report can be generated as well. See Section 6.

Reports
Intra-Op reports now show the first Start of Anesthesia Care and last End of Anesthesia Care event times in the report header. In addition, the sum of these event intervals (assuming these events are entered more than once in a case) is displayed in the report header (Total), providing the total actual anesthesia time of the case. See Section 20.

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Post-Op Section   Remarks (up to 2,048 characters) can be entered for Post-Op Scores and Checks, as well as assessments. Also, Score, Assess and Checks parameters now are loaded through an environment only. See Section 16.

Screen Saver   A Dräger screen saver can be invoked on clinical workstations from the Utilities menu to ensure patient privacy. See Section 2.

Workstation Type   Workstation Type allows any user to select the type of workstation (i.e., Pre-Op, Holding, Intra-Op or Post-Op) from the Utilities menu, regardless of security rights. All cases must be closed when changing workstation type. See Section 4.

New Sections of the Manual for Version 4.0

The following new procedures and sections have been added to this manual:

- "Comment Icons" on page 2-34
- "Automatic Electronic Signature" on page 2-37
- "Screen Saver" on page 2-38
- "Password Restricted Data" on page 2-39
- "Selecting a Workstation Type" on page 4-2
- "About Loading Environments" on page 4-3
- "Changing the Medical Record No." on page 4-13
- "Opening Several Cases at a Time" on page 4-13
- "HPI (History of Present Illness)" on page 6-22
- "CCOW Patient Context Manager" on page 18-1

Where Do I Use Recorder?

You can use Recorder on any PC in your hospital that is designated as a Recorder workstation. You may, for example, find Recorder workstations in the operating room, in the recovery room, at your desk, or at patient interviewing stations.

The Network Environment

Because Recorder operates in a network environment with a centralized database, you can access your case data from any workstation or PC that is part of the network. Figure 1-1 illustrates a typical network. Note that some of the workstations are connected to anesthesia machines or monitors. Note also that all of the workstations are connected to the Saturn database through the network. The Saturn database is ODBC-compliant and therefore supports SQL queries.

Clinical Workstation

Nonclinical Workstation

Clinical Workstation

Nonclinical Workstation With Printer

Network Hubs

Saturn Conversion Workstation (Workstation Not Pictured)

Network Server
Database Server
Application Server

Nonclinical Workstation
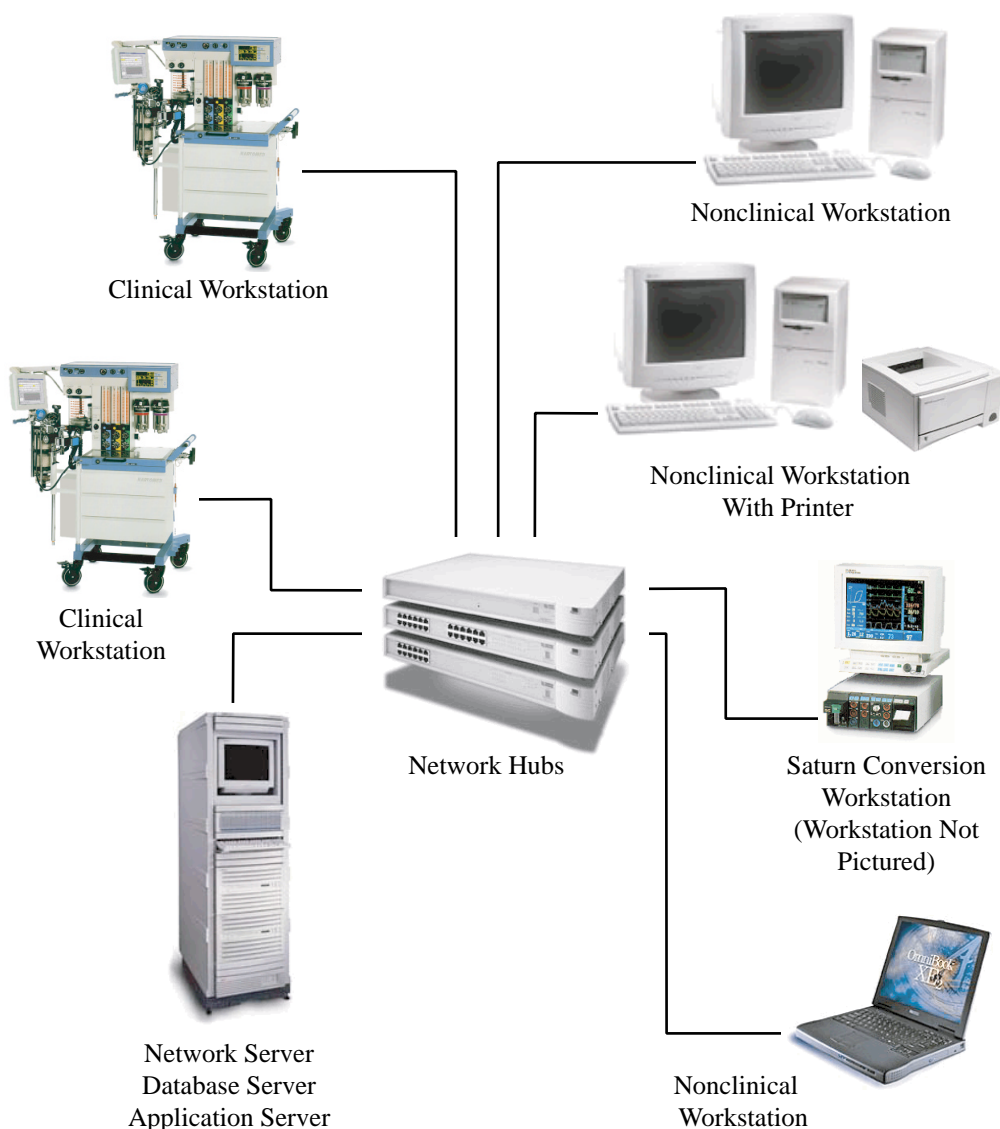
Figure 1-1. The Recorder Network Environment

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Workstations

A Recorder workstation is a PC/AT-compatible computer that meets certain minimum hardware requirements. Any of the following input devices may be available at a Recorder workstation: touch screen, mouse, or keyboard.

The Saturn Clinical Workstation

The Saturn Clinical Workstation is a special workstation intended for use in the operating room and for related tasks. This workstation has the following features:

• It has a touch screen with large controls for special OR displays. This enables you to use your fingers, as well as a stylus or some other pointing device, to interact with the OR displays.

• It runs the Recorder application at all times. This provides security and convenience, ensuring that Recorder is available to you when you need it.

• It contains an isolation transformer, which meets the leakage current specifications of the UL and CSA Standards for medical equipment.

• It has an uninterruptable power supply (UPS), which manages system software during interruptions of AC-mains current. The uninterruptable power supply ensures continuous operation of the software and prevents the need to reboot the system in the event of a short AC power failure.

• It utilizes opto-isolation ports, which prevent ground loops and leakage current from external devices into the workstation.

• It contains a control status card, which monitors and controls speaker functions (if speakers are used), measures and reports on the temperature in the processor, and provides an error recovery mechanism in the event of a system malfunction.

The Saturn Nonclinical Workstation

The Saturn nonclinical workstation is a standard PC that does not have the necessary hardware to make it a clinical grade workstation (i.e., isolation transformer, isolated communication ports, fluid resistant, etc.). The nonclinical workstation does not operate in the OR and it is never connected to a medical device.

All Saturn applications work in the same manner as if they were installed on a Saturn Clinical Workstation, except Recorder cannot automatically record data from medical devices.

Workstation Installations

Recorder can be installed as one of two types of workstations: clinical and nonclinical.

Clinical Installation

The clinical installation configures Recorder so that you always remain in the application (a safety feature to ensure uninterrupted recording of a case) and to ensure that data can be recorded from external sources. This installation allows you to have one case open at a time so that there is no confusion that could lead to the recording of data in the wrong case. The open case fills the entire display.

Nonclinical Installation

The nonclinical installation configures Recorder so that you can leave the application and toggle to other applications on your desktop. It also lets you open, minimize and maximize multiple cases concurrently on the display.

How Does Recorder Work?

Recorder takes case data supplied by external sources, makes it available for viewing, and writes it to the database. External data sources can include the anesthesia machine, monitors, the hospital information system, and you, the clinician. The data from the anesthesia machine and monitors is automatically collected by Recorder during a procedure. The data from you is information that you manually enter, such as patient demographics and drug administrations. Once case data is written to the database, Recorder lets you retrieve it from any workstation, as long as you are authorized to do so.

Example: You retrieve demographic data for a new case from the hospital administration system, or, if the data is not already in the system, you enter it at a patient interviewing station. This data is stored in the database so that you can retrieve it at the Saturn Clinical Workstation when the procedure begins. Additional data that you enter during the procedure, along with data automatically collected from the anesthesia machine and monitors, is added to the case data that you entered during the initial patient interview. Later, at your desktop workstation, you may wish to open the case again to add details that you did not have time to enter during the procedure.

Security

The Saturn Information System offers three levels of security. The first level ensures that only authorized personnel are able to access the Recorder application. The second level ensures that access to special Saturn functions is restricted to users whose jobs require use of those functions. The third level ensures that certain data types, chosen by the supervising anesthesiologist, require an electronic signature by the user before these items are added to the case record.

Access to Recorder

Logon security controls access to Recorder. The system administrator assigns a user ID and an initial password to each person authorized to use Recorder. Only users with a recognized ID and password combination can log on to Recorder. If you do not have a user ID and password, see your system administrator.

Depending on the Saturn components ordered by your health care facility, you may or may not have access to all functions in Recorder. For example, you may only be able to access the Admission, Holding, and Intra-Op sections, but not the Pre-Op and Post-Op sections. The tabs of those areas that are unavailable to you (i.e., Pre-Op and Post-Op in this example) will appear dimmed at the bottom of the Recorder Main window.

Access to Saturn Functions

Access rights are configured in the List Manager program and determine which special Saturn functions, if any, a user can perform. If you have a question about your access rights, see your system administrator.

Rights	**Saturn Functions**
Administrator	Access all Saturn functions
Admission View	Access the Recorder Admission section
Pre-Op View	Access the Recorder Pre-Op section
Holding View	Access the Recorder Holding section
Intra-Op View	Access the Recorder Intra-Op section
Post-Op View	Access the Recorder Post-Op section
Browse View	Access the Recorder Browse section

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Record Automatic Data	Record automatically-generated data
List Manager	Access the List Manager application
Environment Manager	Access the Environment Manager application
Report Manager	Access the Report Manager application
Case Manager	Access to the Case Manager application
Print Pre-Op Reports	Print the Pre-Op reports
Print Holding Reports	Print the Holding reports
Print Intra-Op Reports	Print the Intra-Op reports
Print Post-Op Reports	Print the Post-Op reports
Outcomes Audit	Access the Recorder Outcomes section
Edit All Cases	Edit cases that have been saved
Edit Automatic Data	Edit automatically recorded data
User Logon	Displays the user's name in the Logon dialog box
Workstation Configuration	Access Workstation Configuration
Purge Cases	Permanently delete cases

Electronic Signature

The Electronic Signature dialog box ensures that only personnel who have special case editing rights can enter certain data types into the case record. Signatures can be required for staff entering vitals, drugs, fluids/gases, events, charges, labs, and outcomes, as well as staff editing automatic data. The electronic signature is configured in the List Manager application.

If you try to enter an item to the case record that requires an electronic signature, the Electronic Signature Dialog box appears (Figure 1-2), requesting you to enter your password. Changes made to an entry, and to each value of a multiple value parameter over time, through editing or deleting, may require an electronic signature.

Note: To enter an electronic signature, a staff person must have a User Logon name and Password assigned. Refer to your Saturn Administrator.

Electronic signatures are also available for staff that are assigned to a case. For example, if you select a staff person in the Anesthesiology Review area of the Plan page of the Pre-Op section, the Sign button is enabled. Check with your system administrator as to whether the electronic signatures of staff will be required to complete a case.

Figure 1-2. Electronic Signature Dialog Box

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How Do I Begin Using Recorder?

Recorder provides a graphical user interface that makes viewing and entering information easy. Its use of standard Windows-type features provides a familiar look and feel, enabling many users to start using the application as soon as it is installed. In addition, Recorder has a user-friendly interface through which you enter case data by simply tapping the screen (if you are using a touch screen) or clicking a mouse button.

Starting Recorder

At clinical workstations, Recorder starts automatically when you turn on the computer. At nonclinical workstations, you manually start Recorder by selecting it from the desktop, just as you would with any other Windows application.

Prerequisites

The following prerequisites apply to this function:

- You must be at a nonclinical workstation in order to manually start Recorder.

- You must be an authorized Recorder user and have a valid user ID and password in order to start Recorder both automatically and manually.

Procedure

To manually start Recorder from a nonclinical workstation, follow the procedure for the input device you are using:

Touch Screen or Mouse   Double-tap or double-click the Recorder icon on the Windows NT desktop.

Keyboard   With the ARROW keys, select the Recorder icon on the Windows NT desktop, and then press the ENTER key.

–Or–
From the Start button, select Programs, then Saturn, then Recorder.

The Logon dialog box appears (Figure 1-3).
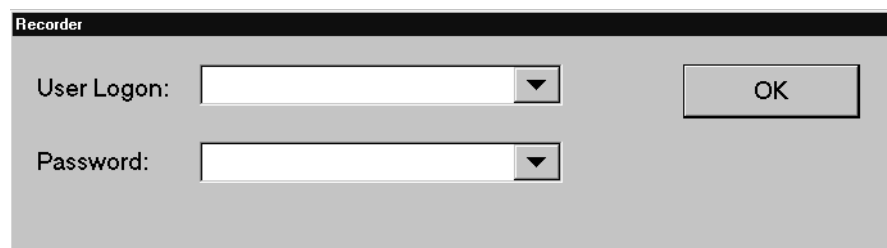
Figure 1-3. Logon Dialog Box

Logging On to Recorder

Before you can use Recorder, you must log on. The logon process ensures that only authorized users can access the application.

Prerequisites

You must be an authorized Recorder user and have a valid user ID and password. The user ID and password are both case sensitive, so make sure you know which

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letters are uppercase and which are lowercase. (If you do not have a user ID and password, see your system administrator.)

Note: Only one user can be logged on to a workstation. The File menu and the toolbar provide a Logout option that you must use before another user can log on to the workstation.

Procedure   Follow these steps to log on to Recorder.

1. If you are at a nonclinical workstation, start Recorder (see "Starting Recorder" on page 1-13). If you are at a clinical workstation, Recorder is automatically started when you turn on the computer.

   The Logon dialog box appears (Figure 1-4).

2. In the User Logon box, select your user ID from the list, or type it in the box. If you begin to type in the box and pause, the typed letters will be used to search the list for the closest match and append the remaining characters of the match to the letters you've just typed. Typing more letters produces a more defined search until the exact match is found. Make sure to type all letters in the correct case.

3. Do one of the following:

   - In the Password box, type the password on the keyboard. Make sure to type all letters in the correct case.

   - If the Password box has a down arrow in it, a numeric keypad may be displayed when you press it (Figure 1-4). You can click or press the numeric password on the keypad and then press ENTER. Click or press C to clear any numbers if you need to start over.

   For security purposes, asterisks are displayed instead of the password as you type.

Figure 1-4. Logon Dialog Box with Keypad

4. Press the OK button. The Main window appears (Figure 1-5 on page 1-15). You are logged on to Recorder.

Main Window

When Recorder is running, its Main window is displayed. If a case is open, it will be contained inside of the Main window. However, if no cases are open, the Main window will be empty, as shown in Figure 1-5.

 Figure 1-5. Main Window, No Cases Open

Main Window Features

Because the Main window is always open, its title bar, menu bar, toolbar, and status bar are always available to you.

Title Bar

The title bar (Figure 1-5) identifies the Recorder application. If a case is open, the title bar also includes the name of the patient and the admission number.

Menu Bar

The menu bar contains individual menus, such as File and View, that you can open. Each open menu, in turn, contains items or selections that you can choose to initiate an action. For example, some of the selections on the File menu let you create a new case, open an existing case, or start recording automatically collected data for a case.

When no cases are open, the Main menu bar is displayed (Figure 1-6). It contains just four menus: File, Entry, Utilities, and Help. These menus are all you need to start a case or to customize Recorder.

Figure 1-6. Menu Bar, No Open Cases

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When a case is open, the Case menu bar (Figure 1-7) replaces the Main menu bar. The Case menu bar contains the same menus that are on the Main menu bar, plus three more: Edit, View, and Window. Also, some of the original menus from the Main menu bar include additional selections. All of the Case menu changes provide options to assist you when you work with a case.

Figure 1-7. Menu Bar, Case Open

Toolbar

The toolbar (Figure 1-8) is located just beneath the menu bar. The buttons on the toolbar duplicate the functionality of certain menu selections. They give you ready access to functions that you use frequently or need to implement quickly. Some of the toolbar buttons are always available for use. Others are available only when a case is open. Buttons that are available, or active, have dark text and graphics. Buttons that are not available, or are inactive, have light text and graphics.
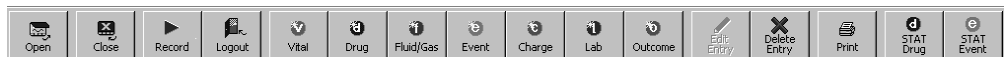
Figure 1-8. Toolbar

Status Bar

The status bar (Figure 1-5) contains general status information, such as the name of the anesthesiologist and the current time. It also displays messages. For example, when you start recording a case, a **RECORDING** message appears on the status bar.

Case Window

When you create or open a case, Recorder displays the Case window inside of the Main window. The Case window has a notebook format, with standard sections to logically organize the case data. Figure 1-9 shows the Case window opened to the Intra-Op section. This is the area you use to enter and display data during a procedure.

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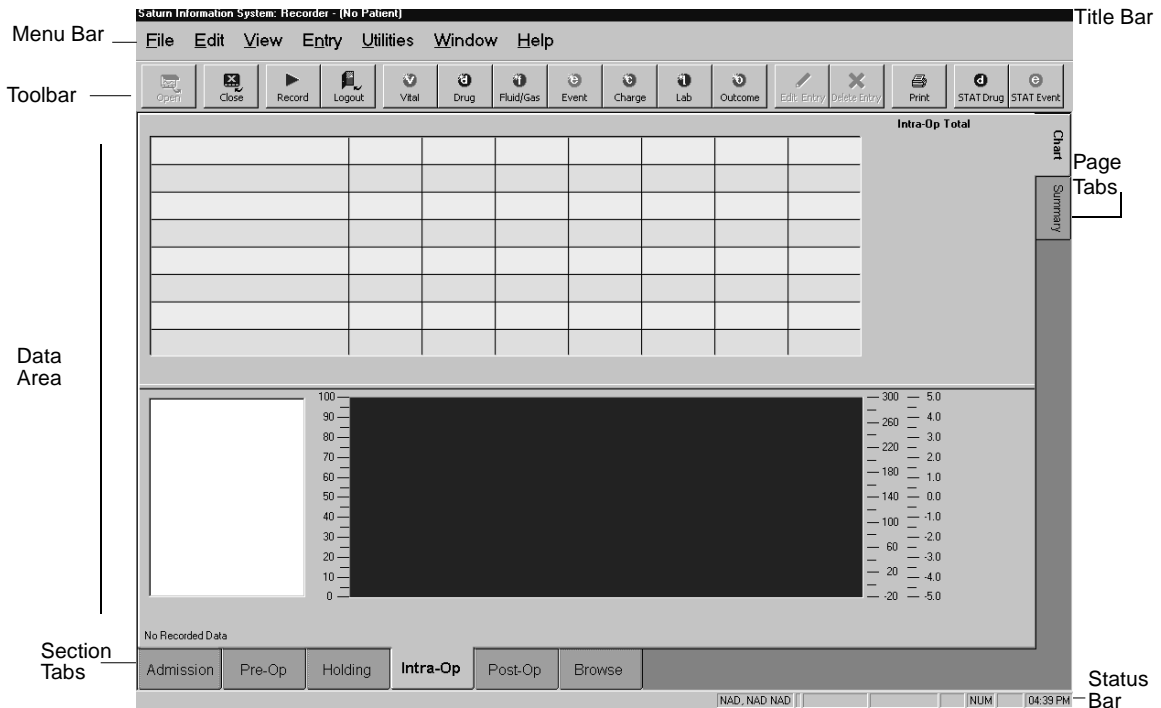
 Figure 1-9. Case Window, Intra-Op Section

Case Window Features

The clinical workstation Case window fills and merges with the Main window and contains a title bar, menu bar, toolbar, a status bar, page tabs, section tabs, and a data area for working with cases.

The nonclinical workstation can have multiple Case windows open in the Main window, and therefore, each Case window has its own title bar, status bar, menu bar, page tabs, section tabs, and a data area for working with cases. The Main window maintains the toolbar that is used by all of the open cases.

Section Tabs

The tabs at the bottom of the Case window designate the different sections of Saturn: Admission, Pre-Op, Holding, Intra-Op, Post-Op, and Browse. The tab of the open section is highlighted (the Intra-Op section in Figure 1-9).

Access to the various sections depends on which sections of Recorder your organization has implemented. For example, the Intra-Op section also comes with the Holding section; the Pre-Op, Intra-Op and Post-Op sections also come with the Admission section. Therefore, those users will have either read-only or total access to data in these other sections. Tabs of sections that have not been implemented at your site remain dimmed and are unavailable to users.

The arrangement of the sections, from left to right, reflects a typical case workflow. The section that is displayed when you open the application is configured via the Workstation Configuration page (see "Changing Workstation Configuration Options" on page 3-11 for more information). After the case is opened, you can access any configured section by pressing its tab.

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Page Tabs

Some sections, like the Intra-Op section shown in Figure 1-9, are further divided into pages. These are designated by tabs along the right side of the window. The tab of the currently opened page is highlighted and bold (the Chart in Figure 1-9 on page 1-17).

Data Area

Each section contains a data area where you can view and enter data about the case. While this area is always in the same location, the contents differ, depending on which section or page is open. The following pages describe the sections and pages.

Admission Section

The Admission section lets you enter information about patient demographics, admission, and scheduled surgery. Depending on the security rights assigned by the system administrator, Pre-Op, Intra-Op and Post-Op users will have either read-only access or total access to data in the Admission section.

The Admission section consists of two pages: Demographics (Figure 1-10) and Surgery & Anes. (Figure 1-11 on page 1-19). You can toggle between these two pages by clicking the page tabs on the right side of the screen.

Figure 1-10. Admission Section, Demographics Page

Demographics

The Demographics page (Figure 1-10) appears when you select the Admission tab and may appear automatically when you open a case. The events that appear in the Milestone Events window are configured by the system administrator.

Surgery & Anesthesia

The Surgery & Anesthesia (Figure 1-11) page allows you to enter patient data related to surgery and anesthesia, including diagnos(es), surgical procedure(s), anesthesia type(s), anesthesia procedure(s), DRG(s) (Drug Related Groups), and the names of the surgeons, anesthesiologists and anesthetists involved in the case.

Figure 1-11. Admission Section, Surgery & Anes. Page

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Pre-Op Section

The Pre-Op section allows you to manually enter data relevant to a patient's case. Depending on the security rights configured by the system administrator, Pre-Op users may also have either read-only access or total access to data in the Admission section (see "Admission Section" on page 1-18).

The Pre-Op section is comprised of five pages: History (Figure 1-12), Systems (Figure 1-13 on page 1-21), Exam (Figure 1-14 on page 1-22), Plan (Figure 1-15 on page 1-23), and Summary (Figure 1-16 on page 1-24). The Attachment button allows you to view additional comments of any item appearing in a window; the "paper" icon next to an item in the window lets you edit or enter new comment information (Figure 1-13 on page 1-21). In addition, scroll bars will appear in windows to accommodate viewing lists that are longer than the size of the window. The History page appears automatically when you select the Pre-Op tab.
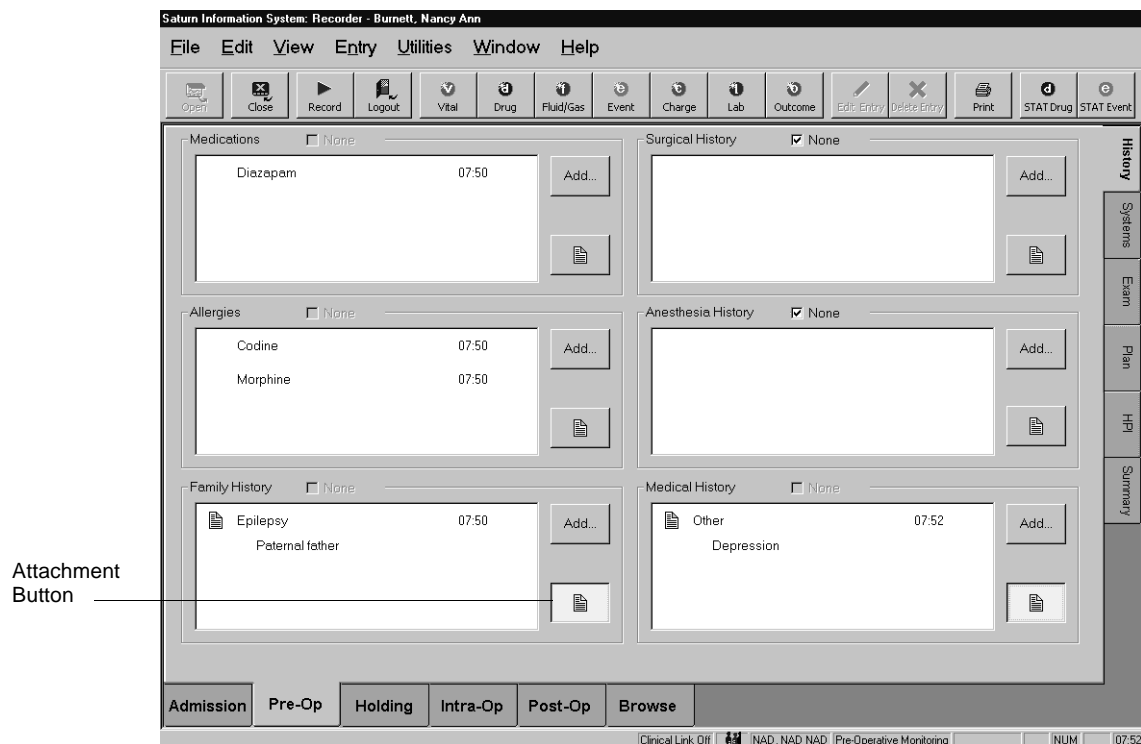
Figure 1-12. Pre-Op Section, History Page

History   The History tab (Figure 1-12) allows you to enter and view the patient's history of medications, allergies, family diseases, surgeries, any anesthesia previously administered to the patient, and the patient's medical history.

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Systems The Systems page (Figure 1-13) allows you to enter and view data collected during a complete review of systems. Check boxes are provided to indicate when the review of a particular system is "within normal limits (WNL) or "not applicable" (N/A). Attachment buttons allow you to view data that is related to a system item listed in a window, as shown in Figure 1-13. The "paper" icon next to an item in the window lets you edit or enter new comment information.

Note: If a "paper" icon appears next to a list item in the window (Figure 1-13, select the item and then press the Attachment button to view the additional remarks documented about that item.
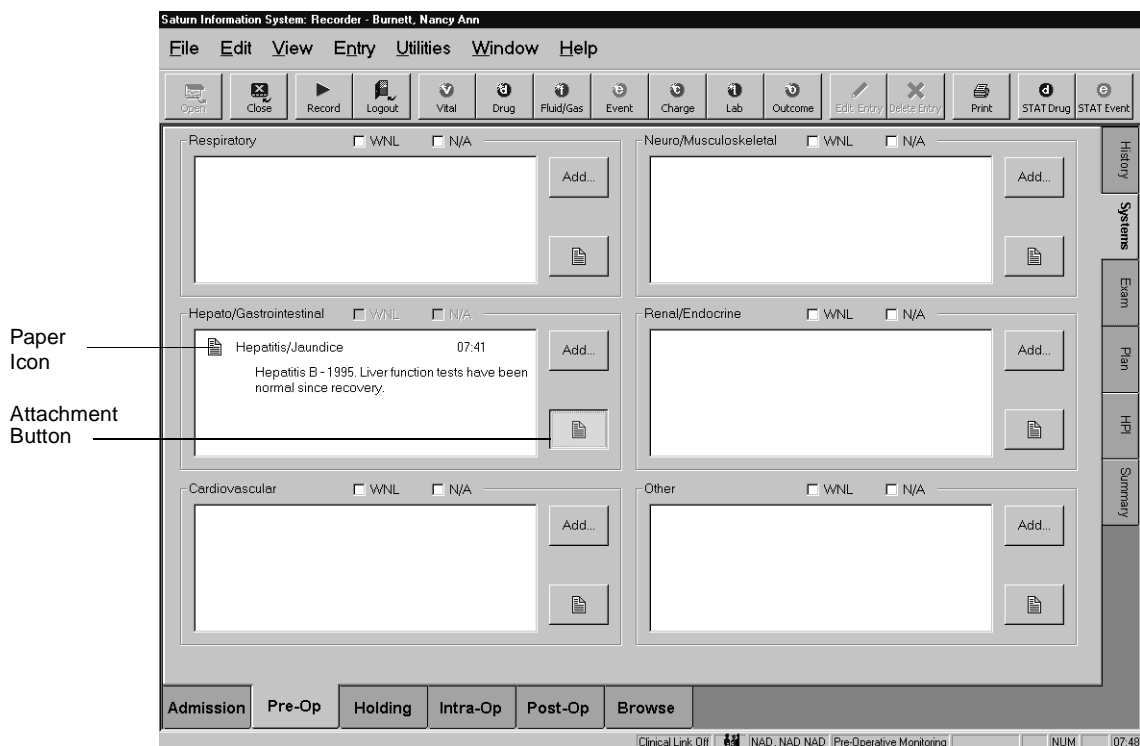
Figure 1-13. Pre-Op Section, Systems Page

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Exam

The Exam page (Figure 1-14) allows you to enter and view information, such as the results of the airway examination gathered during the preoperative physical exam. Check boxes and option buttons are provided to facilitate data entry. More extensive comments can be entered into the text boxes. Labs and vitals are displayed in the grid area of the screen.

Figure 1-14. Pre-Op Section, Exam Page

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Plan

The Plan page (Figure 1-15) allows you to enter and view the prescribed anesthesia plan and to review any comments by the attending physicians. The Process Verification window provides a convenient summary for the steps that need to be completed to make the patient "ready for surgery." The status or completion of all steps leading up to surgery can be updated and viewed in this window. The items listed in the Process Verification window are preconfigured using the Saturn List Manager.

Figure 1-15. Pre-Op Section, Plan Page

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Summary

The Summary page (Figure 1-16) allows you to change and view the summary of all data which has been manually gathered during the preoperative period. The Filters area of the screen lets you limit the list of data by clearing the check boxes of the data sets you do not want to see. As many check boxes can be selected as you like.

You may also list the data according to the date and time it was administered or it occurred (this is the default), alphabetically by name, or according to group by selecting the Time, Name and Group headers at the top of the window. To view a single category of data, select only one of the check boxes in the Filters area of the page. To view multiple categories of data, select some or all of the check boxes.

Note: If a "paper" icon (Figure 1-13 on page 1-21) appears next to a list item in the window, select the item and then press the Attachment button to view the additional remarks documented about that item.
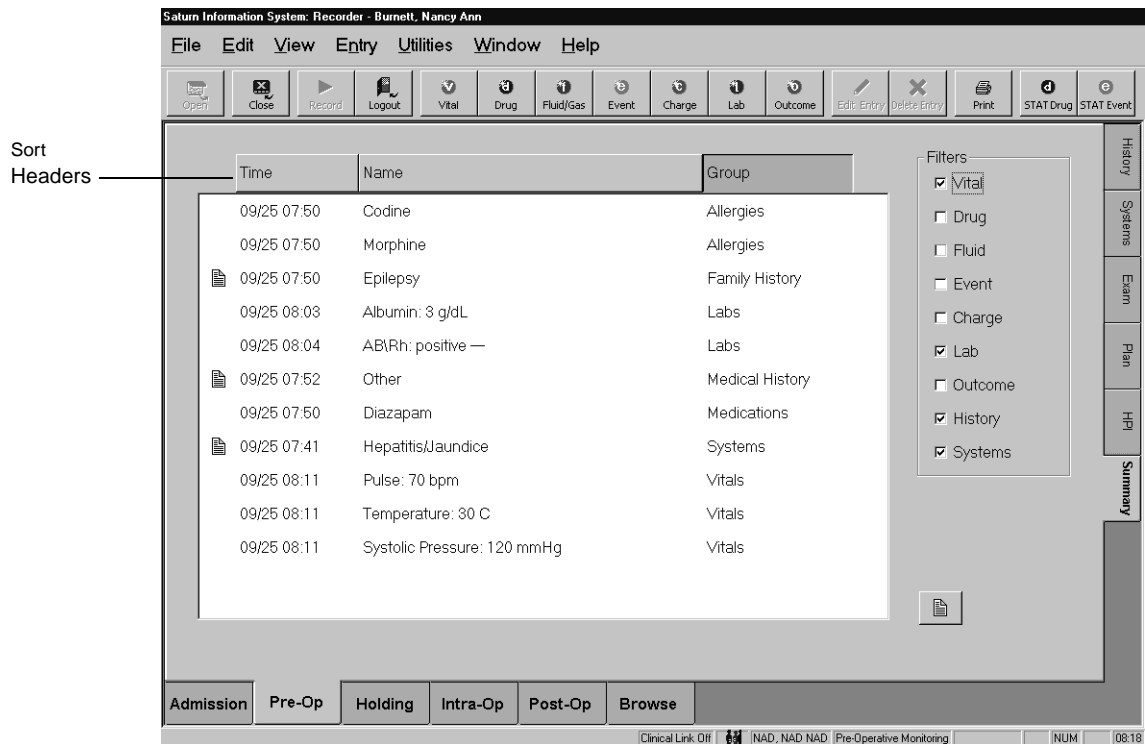
Figure 1-16. Pre-Op Section, Summary Page

Holding Section

The Holding section (Figure 1-17) contains automatically collected and manually entered labs, vital signs, fluids, and drugs administered immediately prior to surgery. The Chart page appears automatically when you select the Holding tab.

Depending on the security rights configured by the system administrator, Intra-Op users also have either read-only access or total access to data in the Holding section (see "Intra-Op Section" on page 1-27).
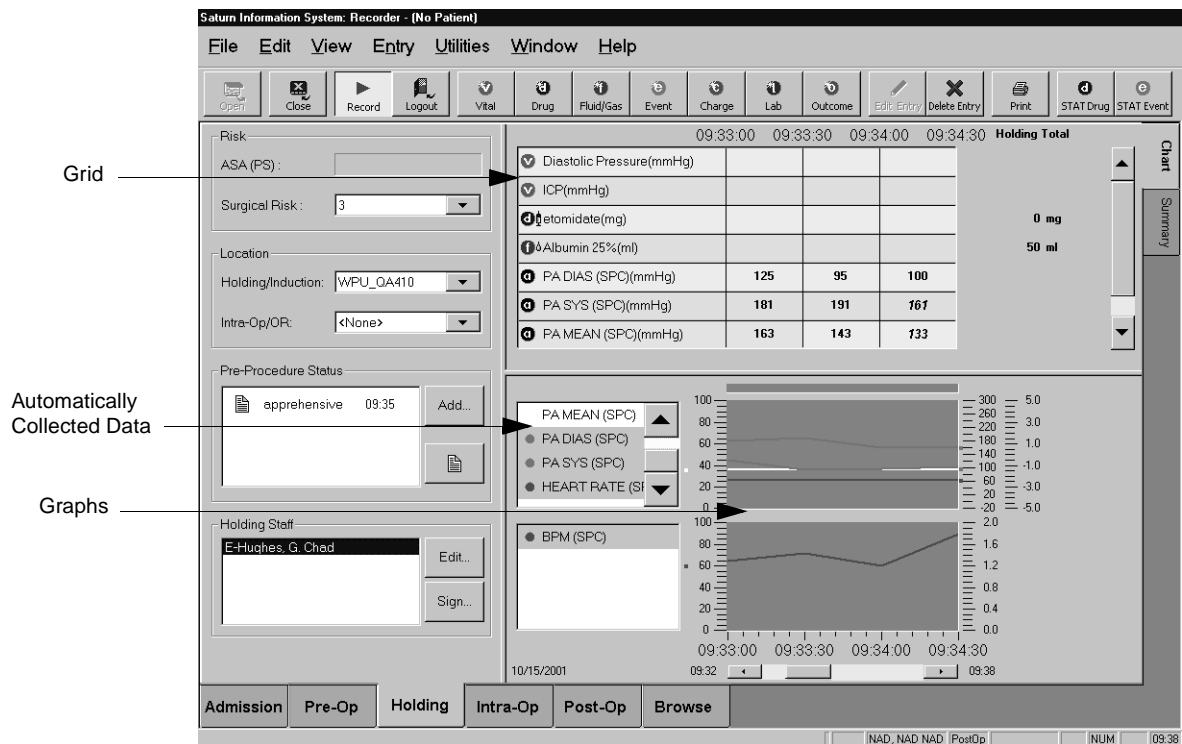
Figure 1-17. Holding Section, Chart

Chart   The Chart page of the Holding section (Figure 1-17) displays all of the information collected about the patient immediately prior to surgery. This section enables you to view data such as the location of the patient during the holding phase, the patient's preanesthesia status (mood, status of consent forms, last food and drink, etc.), holding staff assigned to the patient, as well as drug, fluid, vital sign, lab and other data.

The Chart is a split screen display with a grid area on the upper part and a graphic area on the lower part of the display:

- The grid area may be split. The upper portion of the grid displays drug, vitals, lab, and fluid/gas data (Figure 1-17). The lower portion of the grid (Figure 11-11 on page 11-17) displays fluid balance data if the fluid balance option is selected from Case View Settings on the View menu. Refer to "Fluid Balance" on page 11-15 for details.

- The graph portion displays automatically collected data.

Summary

The Summary page of the Holding section (Figure 1-18) provides an overview of the events and other information recorded immediately prior to surgery. The Filters area of the screen lets you limit the list of data by clearing the check boxes of the data sets you do not want to see. As many check boxes can be selected as you like.

You may also list the data according to the date and time it or occurred (this is the default), alphabetically by name, or according to group by selecting the Time, Name and Group headers at the top of the window. To view a single category of data, select only one of the check boxes in the Filters area of the page. To view multiple categories of data, select some or all of the check boxes.

Note: If a "paper" icon (Figure 1-13 on page 1-21) appears next to a list item in the window, select the item and then press the Attachment button to view the additional remarks documented about that item.

Figure 1-18. Holding Section, Summary Page

Intra-Op Section

The Intra-Op section (Figure 1-19) contains data automatically collected and manually entered during surgery or treatment. Depending on the security rights configured by the system administrator, Intra-Op users also have either read-only access or total access to data in the Admission and Holding sections (see "Admission Section" on page 1-18 and "Holding Section" on page 1-25).

This section is comprised of two pages: Chart and Summary. The Chart page (Figure 1-19) appears automatically when you select the Intra-Op tab.
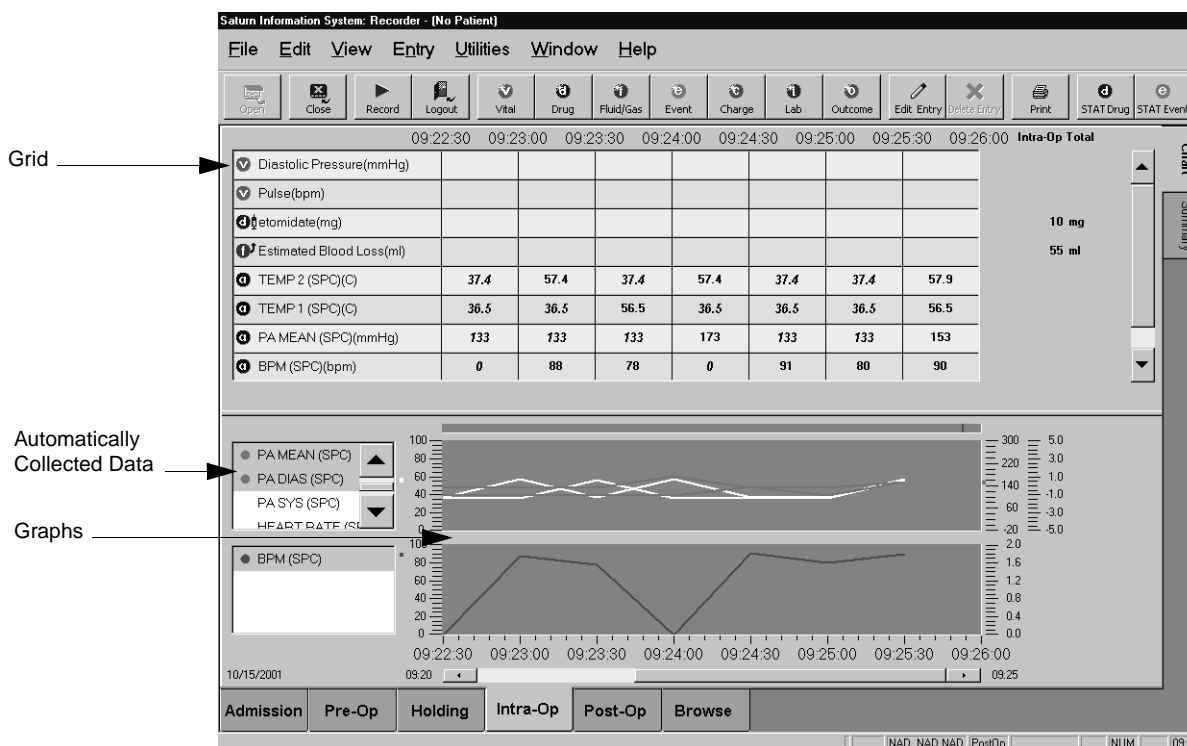
Figure 1-19. Intra-Op Section, Chart

Chart   The Chart page of the Intra-Op section is a split screen display with a grid area on the upper part and a graphic area on the lower part of the display:

- The grid area may be split. The upper portion of the grid displays drug, vitals, lab, and fluid/gas data, as shown in Figure 1-19. The lower portion of the grid (Figure 11-11 on page 11-17) displays fluid balance data if the fluid balance option is selected from Case View Settings on the View menu. Refer to "Fluid Balance" on page 11-15 for details.

- The graph portion displays automatically collected data.

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Summary

The Summary page in the Intra-Op section (Figure 1-20) allows you to view summaries for vitals, drugs, fluids/gases, events, charges, labs and outcomes. The Filters area of the screen lets you limit the list of data by clearing the check boxes of the data sets you do not want to see. As many check boxes can be selected as you like.

You may also list the data according to the date and time it was administered or occurred (this is the default), alphabetically by name, or according to group by selecting the Time, Name and Group headers at the top of the window. To view a single category of data, select only one of the check boxes in the Filters area of the page. To view multiple categories of data, select some or all of the check boxes.

Note: If a "paper" icon (Figure 1-13 on page 1-21) appears next to a list item in the window, select the item and then press the Attachment button to view the additional remarks documented about that item.

Figure 1-20. Intra-Op Section, Summary Page (Events Shown)

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Post-Op Section

The Post-Op section lets you create a complete record containing data automatically collected and manually entered during the postoperative phase. Depending on the security rights configured by the system administrator, Post-Op users also have either read-only access or total access to data in the Admission section (see "Admission Section" on page 1-18).

The Post-Op section is comprised of seven pages: Chart (Figure 1-21), Systems (Figure 1-22 on page 1-30), Score (Figure 1-23 on page 1-31), Assess (Figure 1-24 on page 1-32), Checks (Figure 1-25 on page 1-33), Discharge (Figure 1-26 on page 1-34), and Summary (Figure 1-27 on page 1-35). The Chart page (Figure 1-21) appears automatically when you select the Post-Op tab.
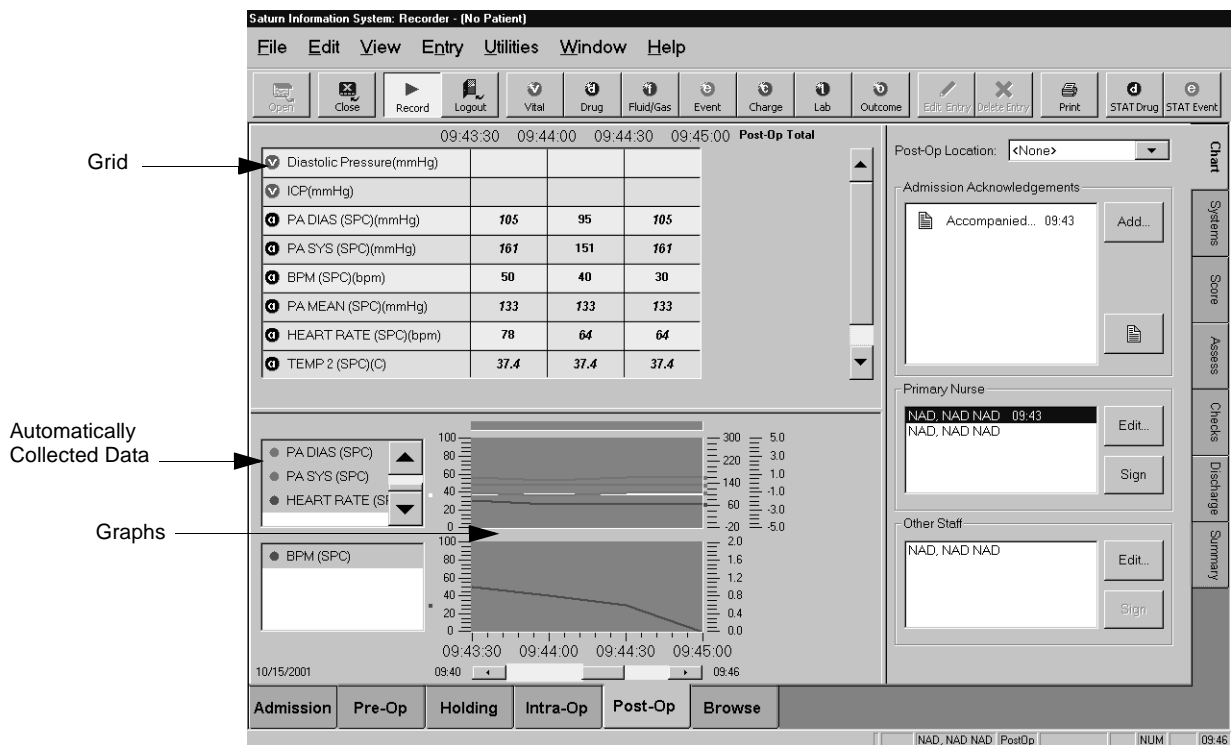
Figure 1-21. Post-Op Section, Chart

Chart   The Chart in the Post-Op section (Figure 1-21) displays postoperative data, such as lab results, vital signs, drugs, and fluids administered. Other boxes are provided to document staff and admission notes (i.e., intensive care bed required).

The Chart page of the Post-Op section is a split screen display with a grid area on the upper part and a graphic area on the lower part of the display:

- The grid area may be split. The upper portion of the grid displays drug, vitals, lab, and fluid/gas data (Figure 1-21). The lower portion of the grid (Figure 11-11 on page 11-17) displays fluid balance data if the fluid balance option is selected from Case View Settings on the View menu. Refer to "Fluid Balance" on page 11-15 for details.

- The graph portion displays automatically collected data.

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Systems   The Systems page in the Post-Op section (Figure 1-22) allows you to enter the results of a postoperative review of systems. This functions exactly like the Pre-Op Systems page.

Figure 1-22. Post-Op Section, Systems Page

Score

The Score page (Figure 1-23) is provided to allow nursing staff to record postoperative recovery scoring. Scores are configured in the List Manager and Environment Manager programs. Scores only appear on this page when they are configured in an environment.

Figure 1-23. Post-Op Section, Score Page

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Assess

The Assess page (Figure 1-24) is provided to allow for recording of postoperative physical assessments. Assessments are configured in the List Manager and Environment Manager programs. Assessments only appear on this page when they are configured in an environment.

Figure 1-24. Post-Op Section, Assess Page

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Checks

The Checks page (Figure 1-25) is an extension of the assessment process, where nurses can document the results of specific recovery assessments. Checks are configured in the List Manager and Environment Manager programs. Checks only appear on this page when they are configured in an environment.

Figure 1-25. Post-Op Section, Checks Page

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Discharge The Discharge page (Figure 1-26) allows you to document the discharge process, including continuation of care, special instructions, level of the patient's awareness upon discharge, and staff members involved in the discharge process.

Figure 1-26. Post-Op Section, Discharge Page

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Summary

The Summary page in the Post-Op section (Figure 1-27) allows you to view summaries of each page in the Post-Op section (Systems, Score, Assess, Checks and Discharge) as well as any postoperative data (vitals, drugs, etc.) gathered during the postoperative phase. The Filters area of the screen lets you limit the list of data by clearing the check boxes of the data sets you do not want to see. As many check boxes can be selected as you like.

You may also list the data according to the date and time it was administered or occurred (this is the default), alphabetically by name, or according to group by selecting the Time, Name and Group headers at the top of the window. To view a single category of data, select only one of the check boxes in the Filters area of the page. To view multiple categories of data, select some or all of the check boxes.

Note: If a "paper" icon (Figure 1-27) appears next to a list item in the window, select the Attachment button to view the additional remarks documented about that item.
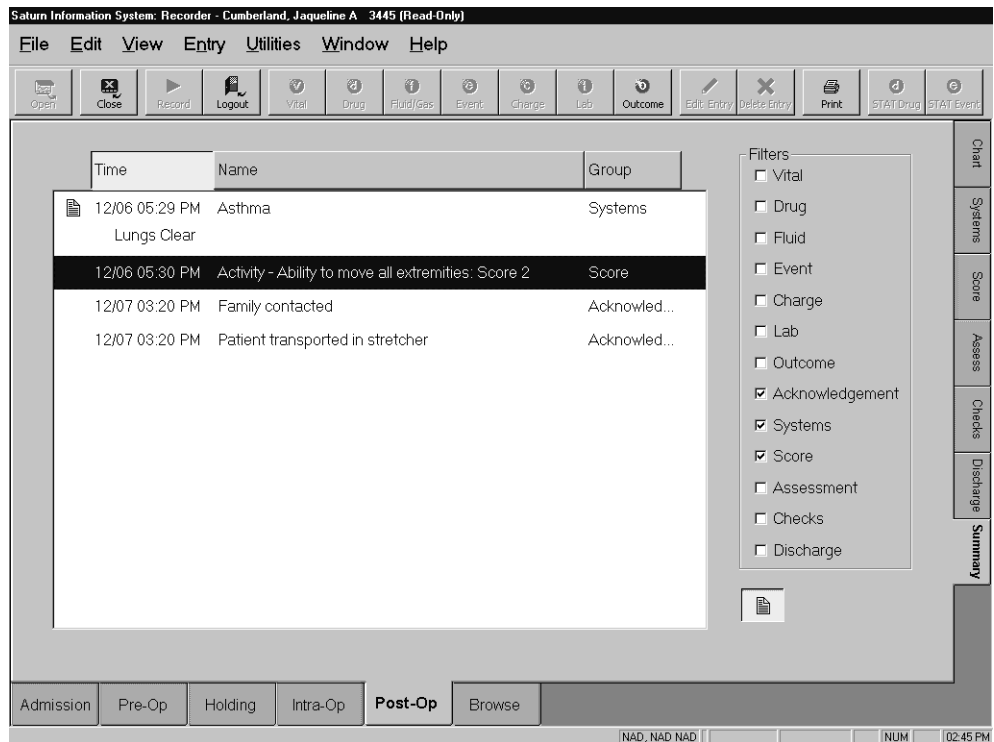
Figure 1-27. Post-Op Section, Summary Page

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Browse

The Browse section lets you view information stored on a hospital's intranet or on the Internet. Once this tab is selected, a pre-selected document either from the Internet or intranet will appear. Other URL's can be entered to access other pages on the Internet or intranet as well. Refer to your system administrator for details.

Figure 1-28. Browse Section

CCOW Patient Context Manager

The CCOW (Clinical Context Object Workgroup) Patient Context Manager allows you to use the Recorder application collaboratively with other applications. When the CCOW feature is enabled in Recorder, a patient that is selected in one program is selected automatically in other applications that are CCOW-enabled and running on the same desktop.

For example, you open John Doe's case in Recorder. If you use a financial application that also has information about John Doe and both of these applications are CCOW enabled, then when you open John Doe in Saturn, the same patient record is opened in the financial application. Refer to "Changing Workstation Configuration Options" on page 3-11 as well as Section 18 for more information.

How Do I Use This Manual?

This manual explains how to use the Recorder application.

Manual Organization

This manual is organized sequentially to mirror the steps of a clinician through a typical perioperative case. However, you can move between any sections within the application and the manual, as your daily activities require you to do so.

Getting Started

Getting Started (Appendix A) is a condensed version of the manual that contains abbreviated procedures and explanations, from logging on to Recorder, to beginning and building a case, to logging off. It is suggested that you refer to the main body of the manual for complete information regarding all functions of the Saturn Recorder program.

Conventions

Standard typographical and keyboard conventions help you interpret the information presented in this manual. These conventions are described in the following table.

Table 1-1. Typographical and Keyboard Conventions

Convention	Used For	Example
Helvetica Type	Window controls, such as entry boxes, lists, menu options, and toolbar buttons.	In the Last box, enter the patient's last name.
Small Capitals	Keyboard keys.	To display a menu, press the ALT key, then the underlined letter in the menu name.
Italics	A generic data description, for which you or the system substitutes a specific value.	Enter the time in *hh:mm* format.
Monospace Type	Messages displayed by the system.	If you receive the message `Case in Use`, the case is already open.
Comma (,) between key names	Keyboard keys that you press one after the other. (Press the first key and release it. Then press the second key and release it.)	To display the File menu, press ALT, F.
Plus sign (+) between key names	Keyboard keys that you press simultaneously. (Press the first key and, while holding it, press the second key. Then release both keys.)	Press the TAB key (SHIFT+TAB to move backward) until the button is highlighted.

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2

Learning the Basics

This section describes common elements of the Recorder interface and explains how to use them.

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The Recorder Interface

The Recorder interface contains structural elements that are either always visible or that appear over and over again. Some of these elements, such as the menu bar and toolbar, were introduced in the previous section. This section describes how to use standard interface elements with different input devices.

Many of the elements discussed in this section are common to Windows NT and other Windows-type applications. Therefore, if you have experience with any of the Windows operating systems, you may already know how to use these elements.

Menu Items

The menu bar, described in detail in the previous section, contains individual menus that you can open. Figure 2-1 shows the open File menu. When a menu is open, you can choose an item on the menu to perform an action.

Figure 2-1. Sample Menu (File)

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When the instructions in this manual tell you to choose or select a menu item, use the method in Table 2-1 that corresponds to your input device.

Sample Instruction: On the File menu, choose Open Case.

Table 2-1. Choosing a Menu Item

Input Device	Method
Touch Screen	On the menu bar, tap a menu name to display the menu. Then tap a menu item.
Mouse	On the menu bar, click a menu name to display the menu. Then click a menu item.
Keyboard	To display a menu, press the ALT key and then the key that corresponds to the underlined letter in the menu name. When the menu appears, do one of the following: • Press the UP or DOWN ARROW key to highlight an item, then press the ENTER key. • Press the key that corresponds to the underlined letter in an item name. *Example:* You want to choose the New Case option on the File menu. Press ALT and then F (ALT,F) to display the File menu. Then, either press the N key, or highlight New Case and press ENTER. *Note:* Some menu items have keyboard shortcuts. If an item has a keyboard shortcut, it is shown on the menu to the right of the item's name. For New Case, the keyboard shortcut is CTRL+N.

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Menu Types

The following tables describe the menus of Recorder.

Note: Menus and menu items preceded by an asterisk (*) are only displayed after a case is open.

File

Table 2-2. File Menu Options

Menu Item	Keyboard and Accelerator Keys	Description
Open Case	ALT, F, O CTRL+O	Opens an existing case. See "Opening an Existing Case" on page 4-8.
New Case	ALT, F, N CTRL+N	Creates a new case. See "Creating a New Case" on page 4-4.
* Close	ALT, F, C	Closes the current case. See "Closing a Case" on page 19-4.
Record	ALT, F, R CTRL+R	Starts or stops automatic recording for the current case or displays the Case Open dialog box if no case is open. See "Recording a Case" on page 4-16.
* Load Environment	ALT, F, E Ctrl + E	Displays the Select Environment dialog box (if Environment Manager is installed). See "If you select No, the workstation type is not changed." on page 4-3.
* Print Preview	ALT, F, V	Displays a preview of the report configured in the Print dialog box. See "Using the Print Preview Option" on page 20-18.
* Print	ALT, F, P CTRL+P	Displays the Print dialog box. See "Using the Print Option" on page 20-16.
Logout	ALT, F, L	Logs off the currently logged-on user. See "Logging Off from Recorder" on page 21-2.
Exit	ALT, F, X	Exits the Recorder application. See "Exiting from Recorder" on page 21-2.

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* Edit

Table 2-3. Edit Menu Options

Menu Item	Keyboard and Accelerator Keys	Description
Cut (for future use)	ALT, E, T CTRL+X	Cuts the selected text from the clipboard.
Copy (for future use)	ALT, E, C CTRL+C	Copies the selected text to the clipboard.
Paste (for future use)	ALT, E, P CTRL+V	Pastes the contents of the clipboard in the current box.
Edit Entry	ALT, E, E ENTER	Lets you edit the currently active data entry object. Refer to the editing data instructions in the appropriate section.
Delete Entry	ALT, E, D DELETE	Lets you delete the currently active data entry object. Refer to the deleting data instructions in the appropriate section.
Rollback		Displays the rollback data dialog for adding rollback buffer data to the current case. It is enabled after the Record button is selected, and it is disabled after the Record button is selected to end recording. See "Changing the Start Record Time (Rollback)" on page 4-17.

* View

Table 2-4. View Menu Options

Menu Item	Keyboard	Description
Admission	ALT V, A	Displays the Admission section. See Section 5 for more information.
Demographics	ALT, V, A, D	Displays the Demographics page (patient name, age, medical record number, etc.).
Surgery & Anes.	ALT, V, A, S	Displays the Surgery & Anes. page (surgeon, surgical procedure, diagnosis, anesthesia procedure, etc.).
Pre-Op	ALT V, P	Displays the Pre-Op section. See Section 6 for more information.
History	ALT V, P, H	Displays the History page (medications, allergies and family, surgical, anesthesia and medical histories).

Table 2-4. View Menu Options (continued)

Menu Item	Keyboard	Description
Systems	ALT V, P, Y	Displays the Systems page (respiratory, hepato/gastrointestinal, cardiovascular, neuro/musculoskeletal, rental/endocrine and other systems).
Exam	ALT, V, P, E	Displays the Exam page (hearing, visual, ADL assist, dental, airway classification, labs and vitals, and patient risk factors).
Plan	ALT V, P, P	Displays the Plan page (Pre-Op date, ASA physical status, and process verification, including staff and patient reviews of the anesthesia plan).
HPI	ALT V, P, I	Displays the History of Present Illness page. Up to 4,000 characters of free-form text may be entered.
Summary	ALT V, P, S	Displays the Summary page (summaries for vitals, drugs, fluids, events, charges, labs, outcomes, histories and systems).
Holding	ALT V, H	Displays the Holding section. See Section 7 for more information.
Chart	ALT V, H, C	Displays the Chart page.
Summary	ALT V, H, S	Displays the Summary page.
Intra-Op	ALT V, I	Displays the Intra-Op (OR) section. See Section 8 for more information.
Chart	Alt, V, I, C	Displays the Chart page.
Summary	ALT, V, I, S	Displays the Summary page.
Post-Op	ALT V, T	Displays the Post-Op section. See Section 16 for more information.
Chart	ALT V, T, C	Displays the Chart page.
Systems	ALT V, T, S	Displays the Systems page.
Score	ALT V, T, R	Displays the Score page.
Assess	ALT V, T, A	Displays the Assess page.
Checks	ALT V, T, K	Displays the Checks page.
Discharge	ALT V, T, D	Displays the Discharge page.
Summary	ALT V, T, S	Displays the Summary page.

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Table 2-4. View Menu Options (continued)

Menu Item	Keyboard	Description
Browse	ALT V, B	Displays the Browse section. See Section 17 for more information.
Case View Settings	ALT V, C	Displays the Case View Settings dialog box.

Entry

Table 2-5. Entry Menu Options

Menu Item	Keyboard	Description
* Vitals	F4 or ALT, N, V	Displays the Add Vital dialog box. See Section 14 for more information.
* Drugs	F5 or ALT, N, D	Displays the Add Drug dialog box. See Section 9 for more information.
* Fluids/Gases	F6 or ALT N, F	Displays the Add Fluids/Gases dialog box. See Section 11 for more information.
* Events	F7 or ALT, N, E	Displays the Add Event dialog box. See Section 10 for more information.
* Charges	F8 or ALT, N, C	Displays the Add Charges dialog box. See Section 15 for more information.
* Labs	F9 or ALT N, L	Displays the Add Lab dialog box. See Section 13 for more information.
* Outcomes	F10 or ALT, N, O	Displays the Add Outcomes dialog box. See Section 12 for more information.
STAT Drug	F11	Adds a drug entry to the Drugs list that can be completed at a later time. See "Adding Drug Entries STAT" on page 9-7 for more information.
STAT Event	F12	Adds an event entry to the Events list that can be completed at a later time. See "Adding Event Entries STAT" on page 10-7 for more information.

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Utilities

Table 2-6. Utilities Menu Options

Menu Item	Keyboard	Description
List Manager	ALT, U, L	Starts the List Manager application. This item is disabled if List Manager is not installed. See the List Manager section of the "Saturn Administrator's Guide."
Environment Manager	ALT, U, E	Starts the Environment Manager application. This item is disabled if Environment Manager is not installed. See the Environment Manager section of the "Saturn Administrator's Guide."
Drug Dosage Rate Calculator	ALT, U, C	Calculates a dose unit per weight per time rate (ug/k/min). See "Using the Drug Dosage Rate Calculator" on page 9-18.
System Configuration	ALT, U, S	Displays List Manager's System Configuration dialog box, which contains system general, required fields, and layout information. See "Viewing System Configuration Options" on page 3-2.
Workstation Configuration	ALT, U, W	Displays the Workstation Configuration dialog box, which contains general, reports, and serial port and protocol configuration settings. See "Changing Workstation Configuration Options" on page 3-11.
Touch Screen Calibration	ALT, U, T	Displays the touch screen control panel. This item is disabled if the workstation is not configured to use a touch screen. See "Configuring the Touch Screen" on page 3-18.
Change Password	ALT, U, P	Enables the currently logged-on user to change their password. See "Changing Your Password" on page 3-26.
Disable Touch Screen	ALT, U, D	Disables the touch screen for a short period of time (for cleaning, etc.). This item is disabled if the workstation is not configured to use a touch screen. See "Disabling the Touch Screen" on page 3-25.

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Table 2-6. Utilities Menu Options (continued)

Menu Item	Keyboard	Description
Workstation Type	ALT, U, O	Allows you to select one of the following workstation types: Pre-Op, Holding, Intra-Op, or Post-Op. Available types depend on what Saturn Recorder modules your organization has implemented. If a workstation type is unavailable, it will appear dimmed on the menu. See "Selecting a Workstation Type" on page 4-2.
Launch Screen Saver	ALT, U, V	Displays a screen saver on clinical workstations to ensure privacy of patient records. The feature is optional and is available on clinical workstations only. See "Automatic Electronic Signature" on page 2-37.
Clinical Context	ALT, U, N	Allows you to connect or disconnect from the CCOW Patient Context Manager (refer to Section 18 for details). The options include: • Break Clinical Link - Disengages the workstation from CCOW. • Rejoin Clinical Link - Connects the workstation to CCOW. • Patient - Displays the current name (or name of the last patient viewed) in the patient context environment. See "Joining a Patient Clinical Context" on page 18-5.

* Window   Refer to "Opening Several Cases at a Time" on page 4-13 for more information.

Table 2-7. Window Menu Options

Menu Item	Keyboard	Description
Cascade	ALT, W, C	Cascades (overlaps) all open windows (or cases) on top of each other so that title bars can be seen.
Tile Horizontally	ALT, W, H	Displays all open windows (or cases) as small, non-overlapping, and arranged horizontally.
Tile Vertically	ALT, W, V	Displays all open windows (or cases) as small, non-overlapping, and arranged vertically.

Help

Table 2-8. Help Menu

Menu Item	Keyboard	Description
About Recorder	ALT, H, A	Displays the software name, version, and copyright information.

Toolbar Buttons

Table 2-9. Toolbar Buttons

Button	Keyboard	Description
Open	CTRL+O	Opens an existing case. This option also lets you create a new case.
Close	ALT, F, C	Closes the current case.
Record	CTRL+R ALT F, R	Starts or stops automatic recording for the current case, or displays the Case Open dialog box if no case is open.
Logout	ALT F, L	Logs off the currently logged-on user.
Vital	F4	Displays the Add Vital dialog box.
Drug	F5	Displays the Add Drug dialog box.
Fluid/Gas	F6	Displays the Add Fluid/Gas dialog box.
Event	F7	Displays the Add Event dialog box.
Charge	F8	Displays the Add Charge dialog box.
Lab	F9	Displays the Add Lab dialog box.
Outcome	F10	Displays the Add Outcome dialog box.
Edit Entry	Enter	Lets you edit the selected data.
Delete Entry	Del	Lets you delete the selected data.
Print	CTRL+P ALT F, P	Displays the Print dialog box.
STAT Drug	F11	Adds a drug entry to the case that can be completed at a later time.
STAT Event	F12	Adds an event entry to the case that can be completed at a later time.

Toolbar buttons represent functions that require quick access or that are used frequently. All of these buttons have counterparts in the menus; however, you will probably want to learn the buttons because they provide quicker access. All you need to do to perform the action designated on a toolbar button is press the button.

Various buttons on the toolbar (Figure 2-2) are either enabled or disabled (grayed out), depending on whether a case is open or not. When no cases are open, all buttons are disabled except Open, Record, Logout, STAT Drug, and STAT Event. When a case is open, Vital, Drug, Fluid/Gas, Event, Charge, Lab, Outcome, Print are also enabled. Edit Entry and Delete Entry are enabled when you select an entry on one of the pages to edit or delete.

Figure 2-2. Toolbar

When the instructions in this manual tell you to press a toolbar button, use the method in Table 2-10 that corresponds to your input device.

Sample Instruction: On the toolbar, press the Open button.

Table 2-10. Pressing a Toolbar Button

Input Device	Method
Touch Screen	Tap the button.
Mouse	Click the button.
Keyboard	All toolbar buttons are duplicated as items on various menus, where you can select them using the keyboard (see Table 2-9 on page 2-10). Most of these menu items also have keyboard shortcuts and a few have accelerator keys, which are shown on the menu to the right of the item name.

2 | Learning the Basics

Tabs

The Case window contains a row of tabs at the bottom of the window (Figure 2-3). Each tab designates a section. The tab of the currently opened section is highlighted in bold. In Figure 2-3, the Post-Op section is open.

Some sections, like the Post-Op section, are further divided into pages. Pages are designated by tabs along the right side of the window. The tab of the currently opened page is highlighted in bold. In Figure 2-3, the Chart page is open.

You can easily move among sections and pages in Recorder by pressing the tabs. Or, you can move among sections and pages using the keyboard. Refer to Table 2-4 on page 2-5 for specific keystrokes.
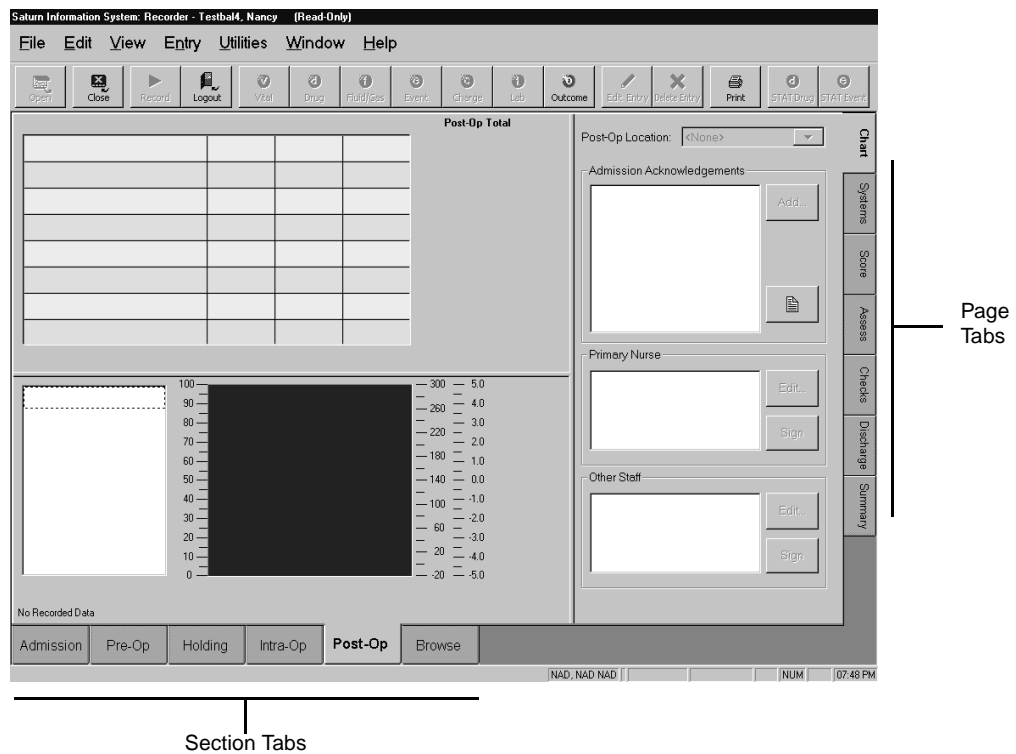
Figure 2-3. Section and Page Tabs

Learning the Basics | **2**

When the instructions in this manual tell you to press a tab, use the method in Table 2-11 that corresponds to your input device.

Sample Instruction: To go to the Post-Op section, press the Post-Op tab.

Table 2-11. Selecting a Section or Page Tab

Input Device	Method
Touch Screen	Tap the section or page tab.
Mouse	Click the section or page tab.
Keyboard	Type the keystrokes as outlined in Table 2-4 on page 2-5.

Dialog Boxes

Many of the actions you take in Recorder result in the display of a dialog box on top of the Case window. The purpose of a dialog box is to enable you to have a *dialog* with Recorder. To have a dialog, enter information into the dialog box and then press a dialog box button to let Recorder know how you want the information to be processed.

Example: If you select a drug from the Add Drug Selection dialog box (Figure 2-5 on page 2-16), a Drug Entry dialog box is displayed (Figure 2-4 on page 2-14). In the Drug Entry dialog box, you have a "dialog" with Recorder about a drug dose. When the dialog box first appears, it already contains the current date and time. You can change the date and time, if necessary, and add more information about the drug dose. When you are finished, press one of the dialog box buttons to close it. To save the information you just entered, press the OK button.

2 | Learning the Basics

Window and Dialog Box Buttons

Many Recorder sections and all Recorder dialog boxes contain buttons that you press. Two of the most common dialog box buttons are OK and Cancel, shown in the sample dialog box in Figure 2-4. When you complete a dialog box and press the OK button, Recorder closes the dialog box and saves its contents as part of the case record. If you press the Cancel button instead, Recorder closes the dialog box without saving its most recently entered data.

Figure 2-4. Sample Dialog Box—Drug Entry

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Learning the Basics | **2**

When the instructions in this manual tell you to press a dialog box or window button, use the method in Table 2-12 that corresponds to your input device.

Sample Instruction: When you are finished entering information, press the OK button.

Table 2-12. Pressing a Dialog Box or Window Button

Input Device	Method
Touch Screen	Tap the button.
Mouse	Click the button.
Keyboard	Do one of the following: • Press the TAB key (SHIFT+TAB to move backward) until the button is highlighted. Then press the SPACE BAR. • Press the ALT key and then, while holding down the ALT key, press the key designated by the underlined letter on the button name. *Examples:* ALT+O for the OK button and ALT+C for the Cancel button.

Sort Headers

Recorder dialog boxes and sections (i.e., Admission, Pre-Op, etc.) include lists with sort headers. Sort headers – also referred to as column headers in this manual – have a dual purpose. In addition to serving as column headers, they also function as "sort" keys that enable you to change the order of a list.

Example: In the Add Drug Selection dialog box, the drugs list contains two sort headers: Entries and Drug Name. The drug list in Figure 2-5 is sorted by drug name. To sort by entries instead, press the Entries header. The items entered into the case so far will appear at the top of the list, with the number of times each data was entered (1, 2, 3, etc.).

EventListSort
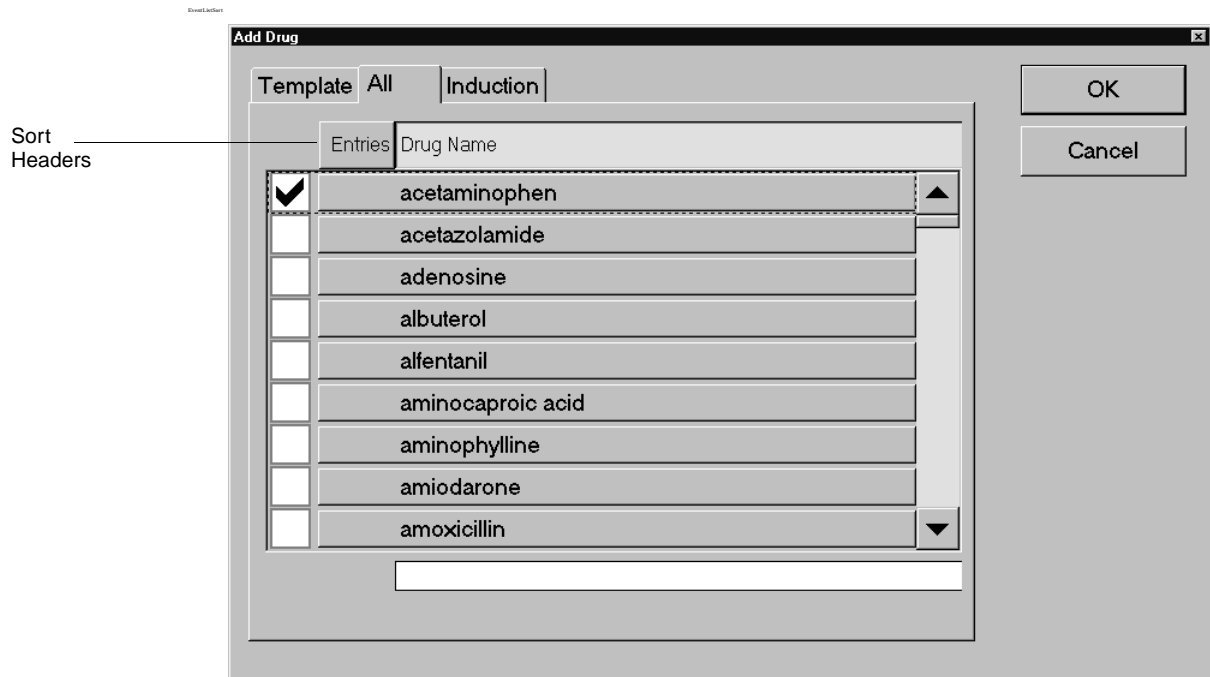
Sort
Headers

Figure 2-5. Sort Headers

When the instructions in this manual tell you to press a sort header or column header, use the method in Table 2-13 that corresponds to your input device.

Sample Instruction: To sort the list by time, press the Time header.

Table 2-13. Pressing a Sort Header

Input Device	Method
Touch Screen	Tap the header.
Mouse	Click the header.

Learning the Basics | **2**

Speed Search

Some lists include a speed search function that enables you to quickly scroll to the desired item by typing the item name in the dialog box. The list scrolls to and displays a more defined selection of items as you type more letters of the item's name in the dialog box.

Example:

1. Press the Drug toolbar button to display the Add Drug Selection dialog box.

2. Press the sort header representing the column of list items for which you want to search.

3. Type "t". The first item beginning with "t" is highlighted by a box of short broken lines, as shown in Figure 2-6.

   Note: There is no insertion point in this text box; just type the letters and they will appear in the text box.

Speed Search text box
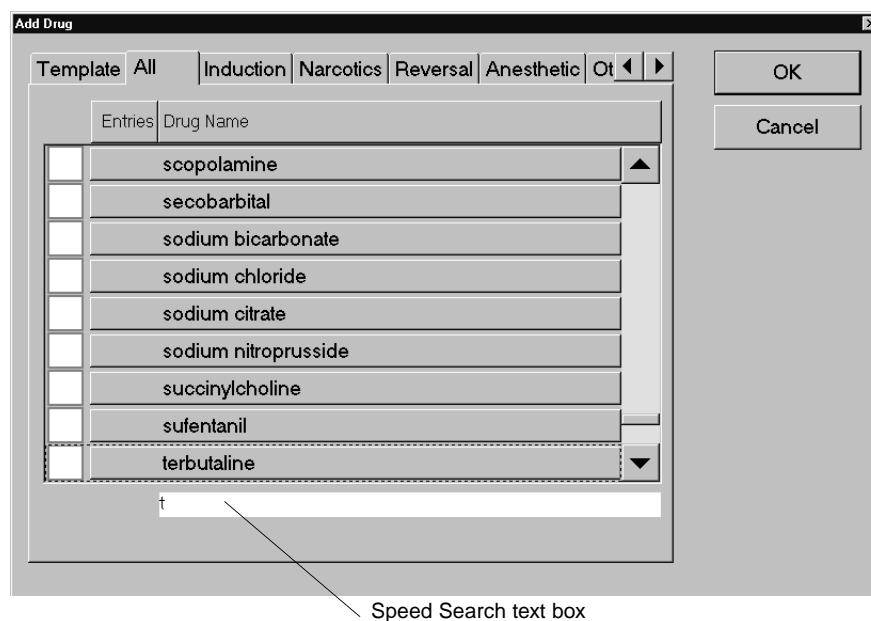
Figure 2-6. Speed Search - First Letter of Item

4. Type "u." The list scrolls down to items beginning with "tu" (Figure 2-7 on page 2-18). The list continues to scroll down to more specifically spelled items as you type more letters.

Speed Search text box
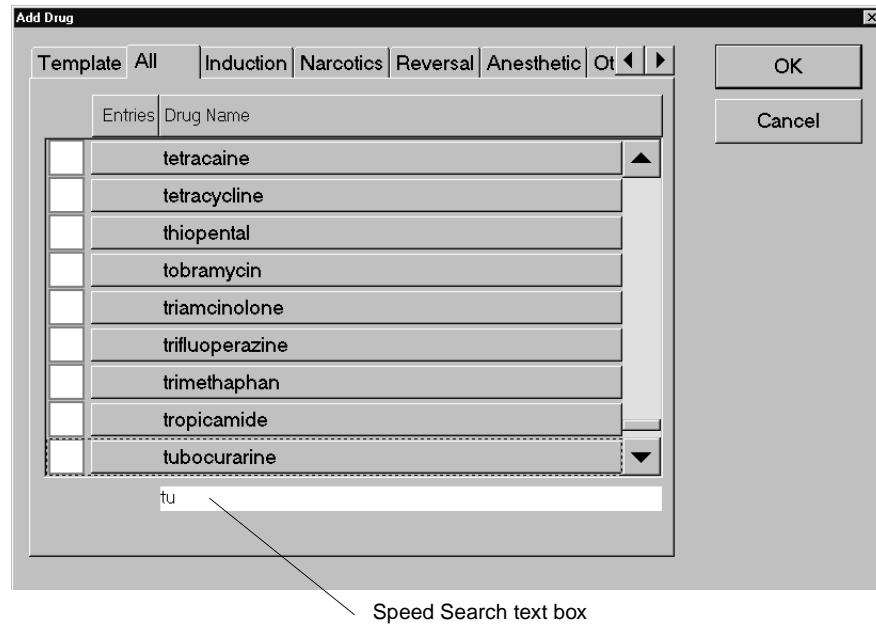
Figure 2-7. Speed Search - First Two Letters of Item

Learning the Basics | **2**

Entry Boxes

Some Recorder sections and dialogs contain one or more rectangular boxes where you type information about the case. (Also see "Drop-Down List Boxes" on page 2-24, "Selection Keypads" on page 2-25, and "Selection Calendars" on page 2-26.)

In the Admission section (Figure 2-8), all of the input areas in the Patient segment of the Demographics page (upper left) are entry boxes, except Sex.

Figure 2-8. Entry Boxes

When the instructions in this manual say to type or enter information in a box, or to select something from a list, use the method in Table 2-14 that corresponds to your input device.

Sample Instruction: Type the patient's date of birth in the DOB box.

Table 2-14. Entering Information in Entry Boxes

Input Device	Method
Touch Screen	Tap the beginning of the box, then type the information.
Mouse	Click the beginning of the box, then type the information.
Keyboard	Press the TAB key (SHIFT +TAB to move backward) until the cursor reaches the box, then type the information.

2 | Learning the Basics

Option Buttons

An option button is a small circle that is marked, or darkened, when selected. Option buttons, which are displayed in groups of two or more, offer a choice among mutually exclusive options, such as *yes* or *no.* No matter how many option buttons are grouped together, you can mark only one. Figure 2-9 shows a dialog box with option buttons for AM and PM.

Note: These option buttons do not appear if your system uses 24-hour time.
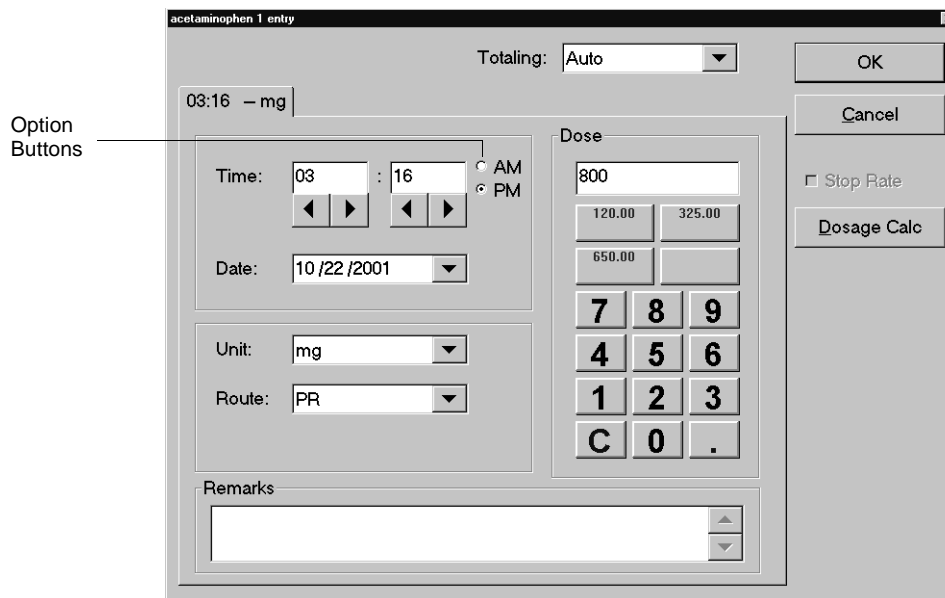
Figure 2-9. Option Buttons

When the instructions in this manual say to select or mark an option button, use the method in Table 2-15 that corresponds to your input device.

Sample Instruction: When you enter a time, remember to select AM or PM.

Table 2-15. Marking an Option Button

Input Device	Method
Touch Screen	Tap an item or its button to select it. Tap it again to deselect it (the mark is cleared).
Mouse	Click an item or its button to select it. Click it again to deselect it (the mark is cleared).
Keyboard	Press the TAB key (SHIFT+TAB to move backward) until the currently selected option is highlighted. Use the ARROW keys to select another item. When you select another item, the previous one is cleared.

Check Boxes

A check box is a small square that is checked when the statement next to the box is true. You may see one check box standing alone (Figure 2-10), or you may see several grouped together. In any case, you can check as many or as few as apply.
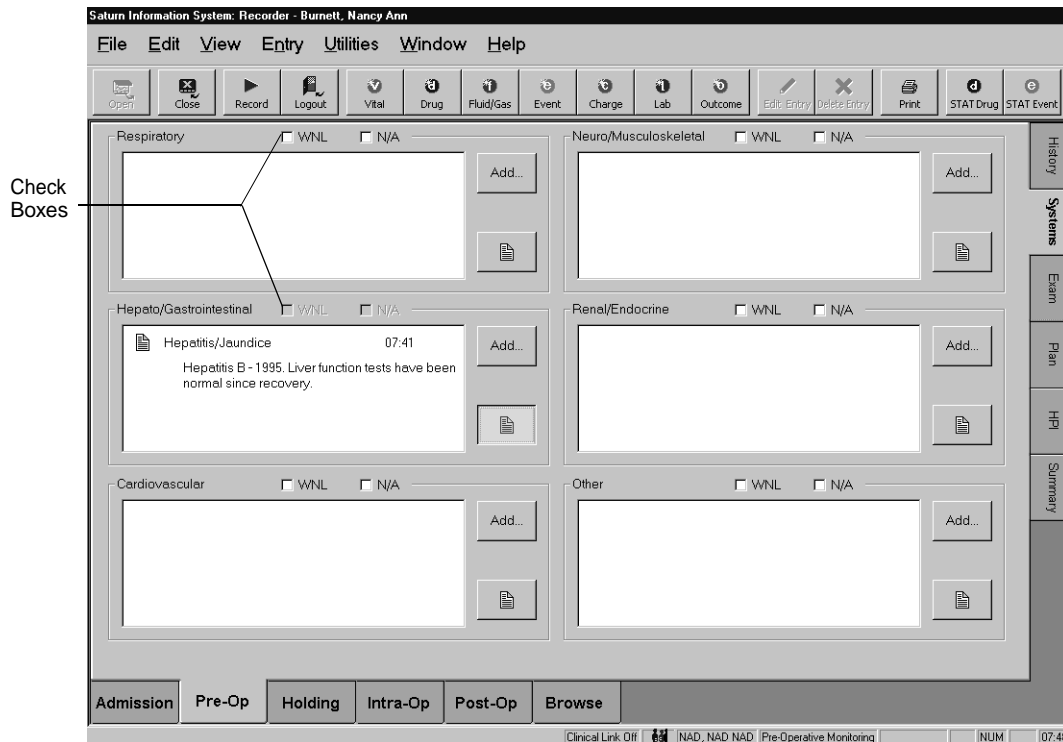
Figure 2-10. Selecting Check Boxes

When the instructions in this manual say to select or check a check box, use the method in Table 2-16 that corresponds to your input device.

Sample Instruction: Check all of the options that apply to the patient's post-anesthetic condition.

Table 2-16. Checking a Check Box

Input Device	Method
Touch Screen	Tap the check box to toggle between selecting and clearing the check box.
Mouse	Click the check box to toggle between selecting and clearing the check box.
Keyboard	Press the Tab key (SHIFT +TAB to move backward) until the box you want to check or clear is highlighted. Press the SPACE BAR to toggle between selecting and clearing the check box.

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Digital Clocks

A digital clock is a type of box used for entering time (see Figure 2-11). Below each Time box (hours, minutes) are right and left arrows for cycling forward and backward through a range of time. When you press the right arrow, the time moves forward one unit (hour or minute). When you press the left arrow, the time moves back one unit.

Note: When you use a digital clock to select a time, you must also mark either the AM or PM option button if your system administrator has set the digital clocks to 12-hour time instead of 24-hour time. The option buttons do not appear if your system uses 24-hour time.

Figure 2-11. Digital Clock

When the instructions in this manual say to select a time using a digital clock, use the method in Table 2-17 that corresponds to your input device.

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Sample Instruction: Select the time when you administered the drug.

Table 2-17. Selecting a Time Using the Digital Clock

Input Device	Method
Touch Screen	Tap one of the arrows to move the time forward or backward one unit. Or, to enter the time yourself (without the digital clock), tap the beginning of the field, then type the time.
Mouse	Click one of the arrows to move the time forward or backward one unit. Or, to enter the time yourself (without the digital clock), click the beginning of the field, then type the time.
Keyboard	Press the TAB key (SHIFT+TAB to move backward) until the cursor reaches the field. Then type the time.

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Drop-Down List Boxes

A drop-down list box is a type of entry box that contains a down arrow usually located at the right end of the field (see Figure 2-12). When you press the arrow, a list appears, from which you can select an item. In some cases, such as the Type selection list shown in Figure 2-12, all items appear when you press the arrow.
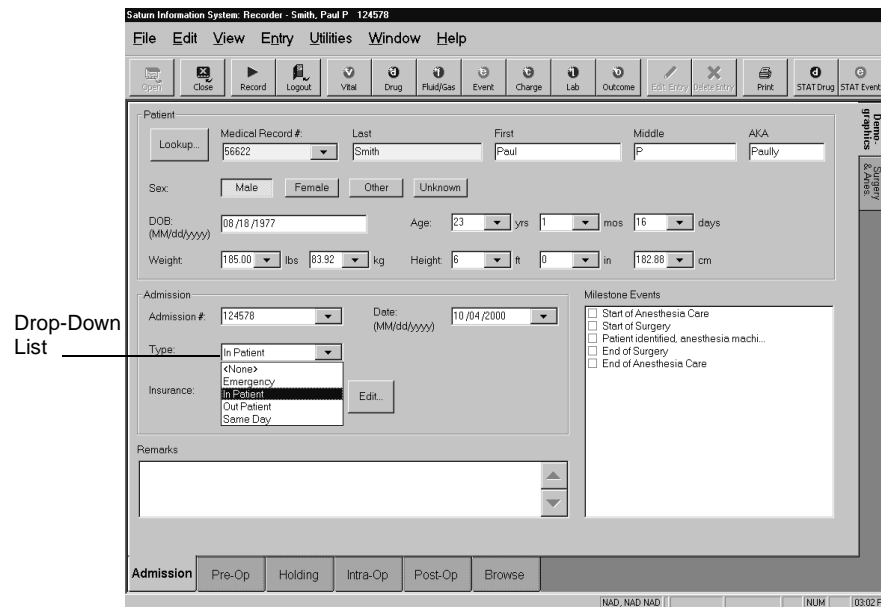
Figure 2-12. Drop-Down List in a List Box

When the instructions in this manual say to select an item from a list box, use the method in Table 2-18 that corresponds to your input device.

Sample Instruction: Select the type of admission in the Type box.

Table 2-18. Selecting a Drop-Down List Box Item

Input Device	Method
Touch Screen	Tap the arrow to the right of the data field to display the selection list. If necessary, scroll through the list to see more items. Then tap an item on the list.
Mouse	Click the arrow to the right of the data field to display the selection list. If necessary, scroll through the list to see more items. Then click an item on the list.
Keyboard	Press the TAB key (SHIFT+TAB to move backward) until the proper field is highlighted. Then press Alt + ↓ to display the list. Use the ARROW keys to highlight a list item, then press the ENTER key to select it.

Selection Keypads

Some selection keypads let you enter drug and fluid/gas doses quickly and accurately. Others are provided in entry boxes for entering other numeric data, such as age, height, or a numeric password (refer to Figure 2-27 on page 2-35). Selection keypads contain numbers like any ordinary keypad. The keypad in Figure 2-13 also contains common doses on special keys, which were configured by your system administrator.
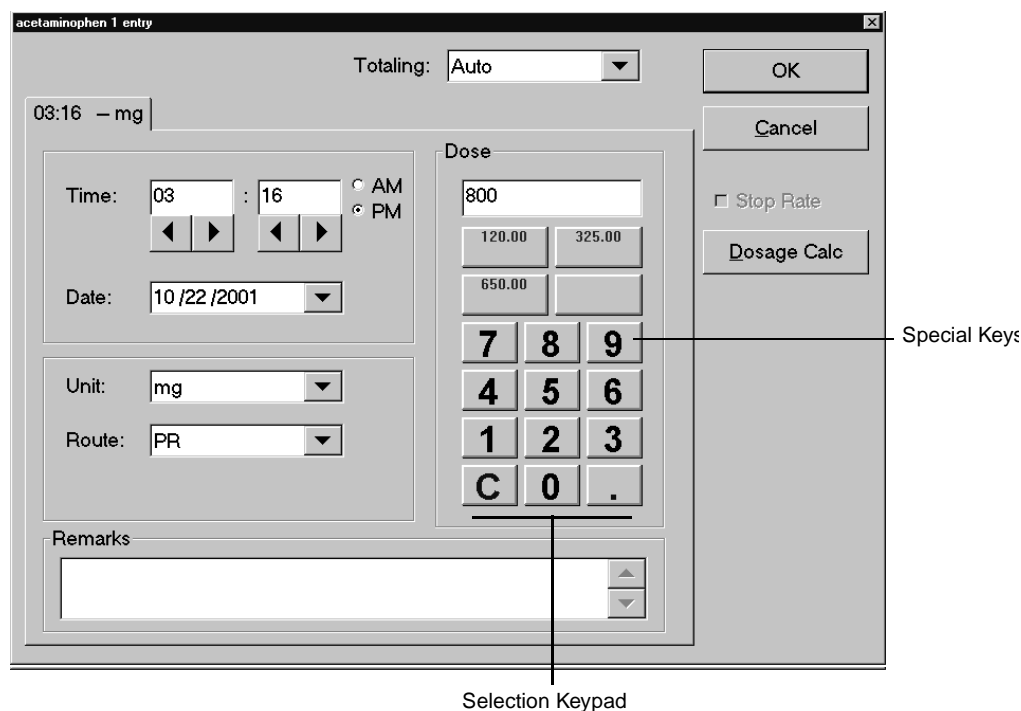
Figure 2-13. Selection Keypad

When the instructions in this manual tell you to select a dose, use the method in Table 2-19 that corresponds to your input device.

Sample Instruction: Select a drug dose using the keyboard or the keypad.

Table 2-19. Selecting a Dose Using the Selection Keypad

Input Device	Method
Touch Screen	Tap one or more keypad buttons to select a dose.
Mouse	Click one or more keypad buttons to select a dose.
Keyboard	You cannot use the keyboard to select a dose from the selection keypad. To enter a dose using the keyboard, press the TAB key (SHIFT+TAB to move backward) until the Dose box is highlighted. Then type the dose in the Dose box.

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Selection Calendars

The selection calendar is a variant of the drop-down list. When you press the arrow at the right end of a Date box, a page from a monthly calendar appears instead of a list (Figure 2-14). You can select a day from the current month or use the arrows at the top of the calendar to move to another month.
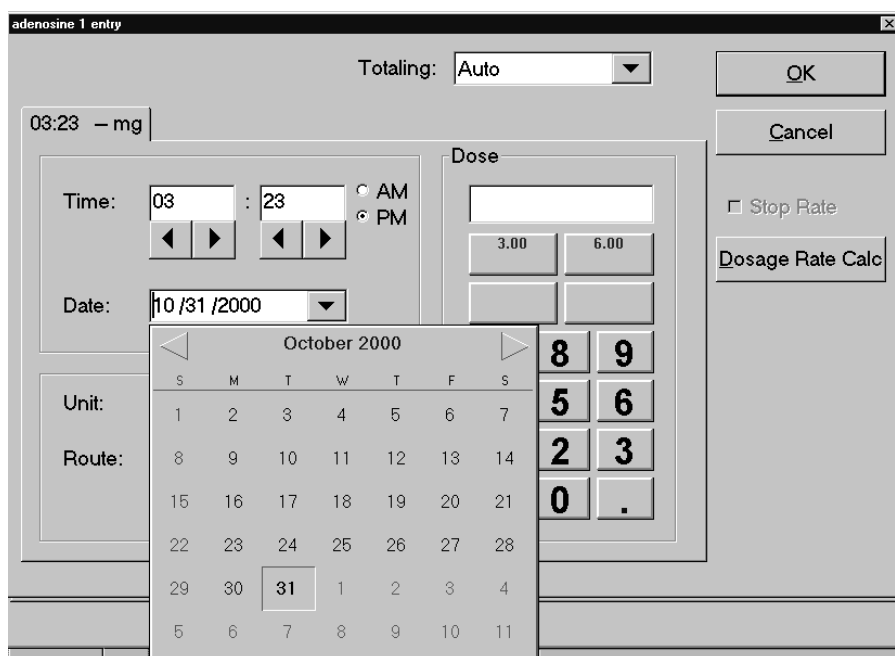
Figure 2-14. Selection Calendar

When the instructions in this manual tell you to select a date, use the method in Table 2-20 that corresponds to your input device.

Sample Instruction: Select a date using the keyboard or the drop-down calendar.

Table 2-20. Selecting a Date Using the Selection Calendar

Input Device	Method
Touch Screen	Tap the arrow to the right of the Date box to display the calendar. Then tap a date. If necessary, use the arrows at the top of the calendar to tap to the correct month.
Mouse	Click the arrow to the right of the Date box to display the calendar. Then click a date. If necessary, use the arrows at the top of the calendar to click to the correct month.
Keyboard	You cannot use the keyboard to select a date from the calendar. To enter a date using the keyboard, press the TAB key (SHIFT+TAB to move backward) until the Date box is highlighted. Then type the date in the Date box.

Pick Lists

A pick list is a selection list from which you can pick multiple items. An Add or Edit button is located at the right end of the pick list box in place of the arrow that is next to a drop-down list box. An example of a pick list box is the Pre-Procedure Status box on the Chart of the Holding section (Figure 2-15).
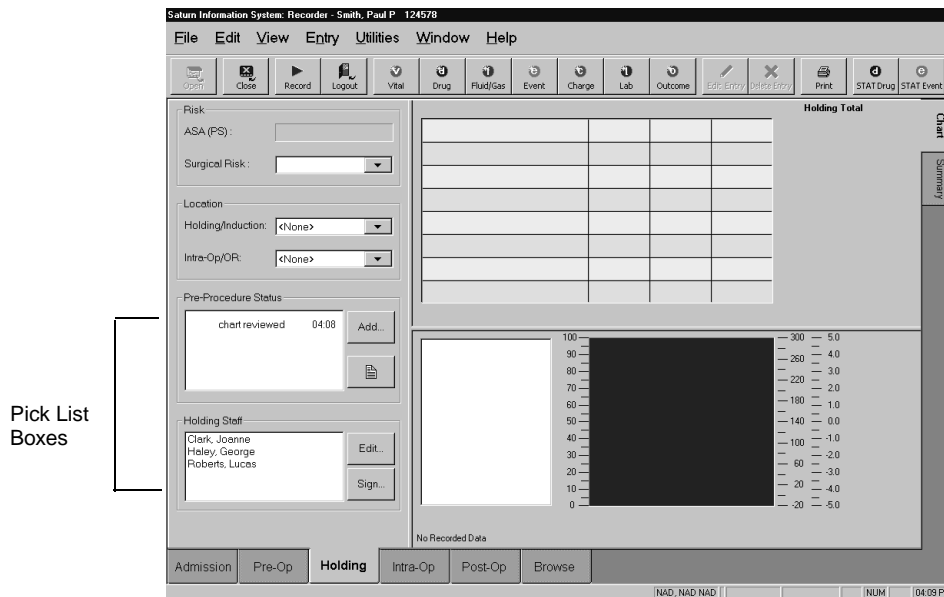
Figure 2-15. Pick List Boxes

Single-Level Pick List   The Insurance list, shown in Figure 2-16, is an example of a single-level pick list. When you press the Add button, a check box list appears. You can check as many of these boxes as you wish.
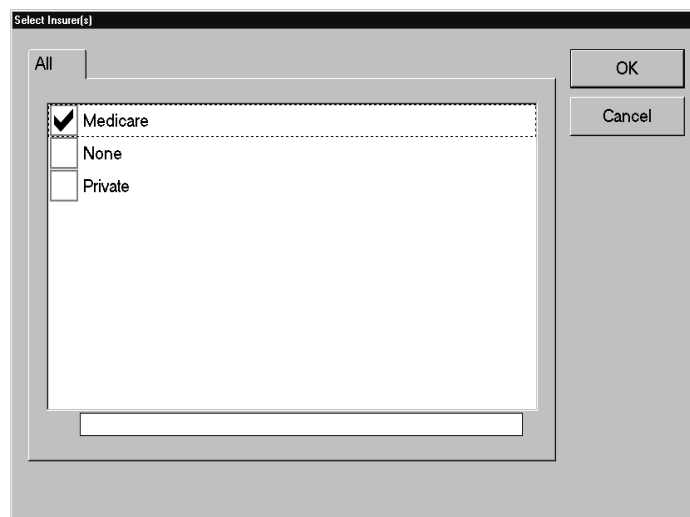
Figure 2-16. Single-Level Pick List

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Multiple-Level Pick List

Other pick lists, such as the Procedure(s) and Diagnosis lists, have multiple levels. The top level is a category which helps to narrow your search for an item. After you pick the category, the next level is displayed. Depending on the list, it may be a subcategory or the final list of items. When you reach the final list of items, you can make only one selection. If you want to make additional selections, you begin again by pressing the Add button.

Example: In the Diagnosis list, select the category "Other Salmonella Infections" (Figure 2-17) and press the Next button. A list of Other Salmonella Infections is displayed (Figure 2-18 on page 2-29).
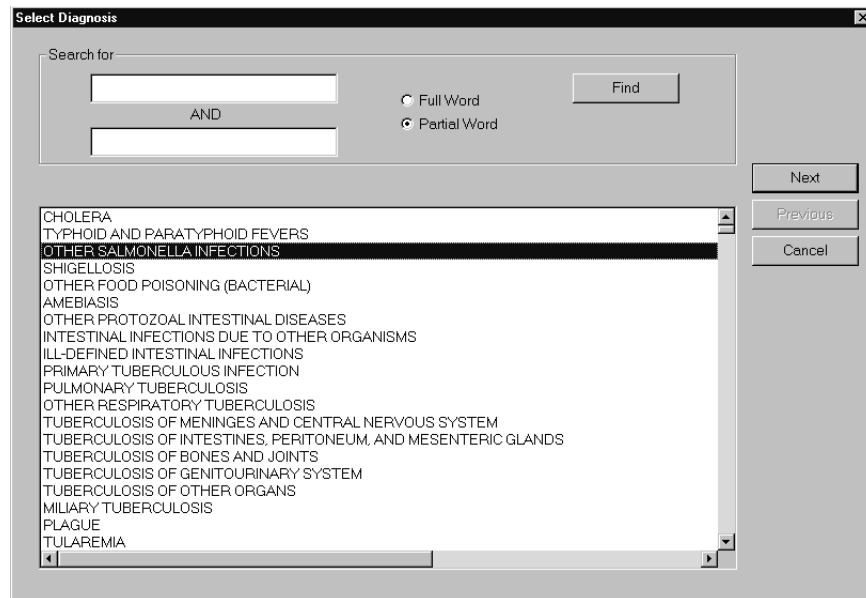
Figure 2-17. Multiple-Level Pick List - Top Level
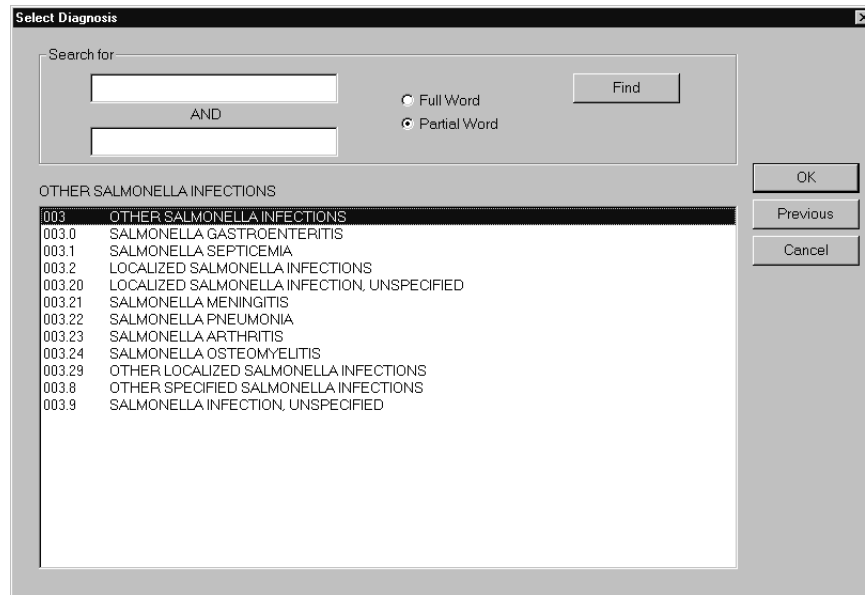
Figure 2-18. Multiple Level Pick List - Second Level

Example: **From the second level of the multiple level pick list, select "Localized Salmonella Infections." It is now entered as a diagnosis in the Patient area.**

Search Function

Multiple-level pick lists enable you to use a search function (Figure 2-19) to find list items containing the text you enter in the Search for box. The text you enter does not need to be case specific (i.e., uppercase or lowercase).
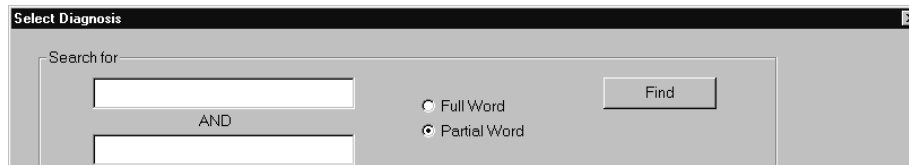
Figure 2-19. Multiple Level Pick List - Search Function

Option buttons (located next to the Search for box) enable you to specify whether you want the text you entered to be treated as a full word or a partial word.

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Full Word
Search - One
Word

Example: In the Search for box, enter "liver" and select the Full Word **option button (Figure 2-20). Then, press the Find button. A search results dialog box appears with the list of items containing the word "liver" (Figure 2-21).**
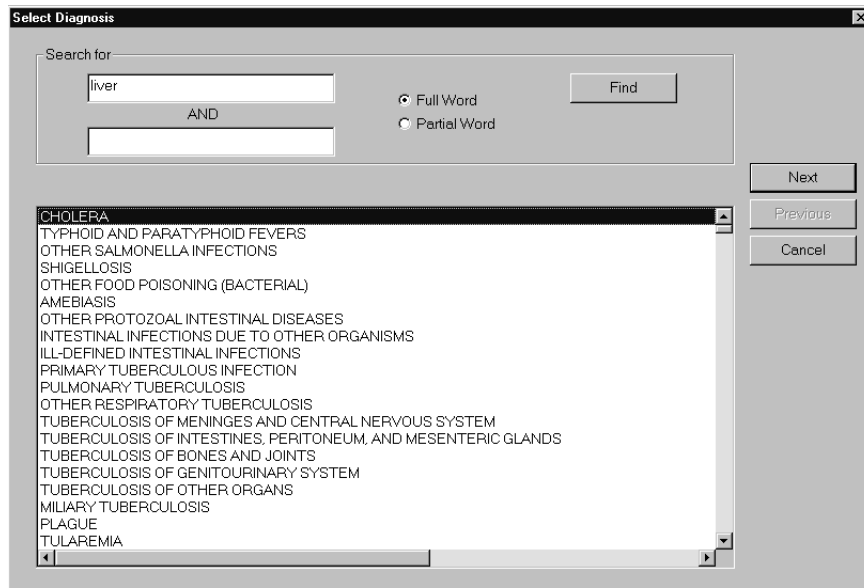
Figure 2-20. Search - One Full Word
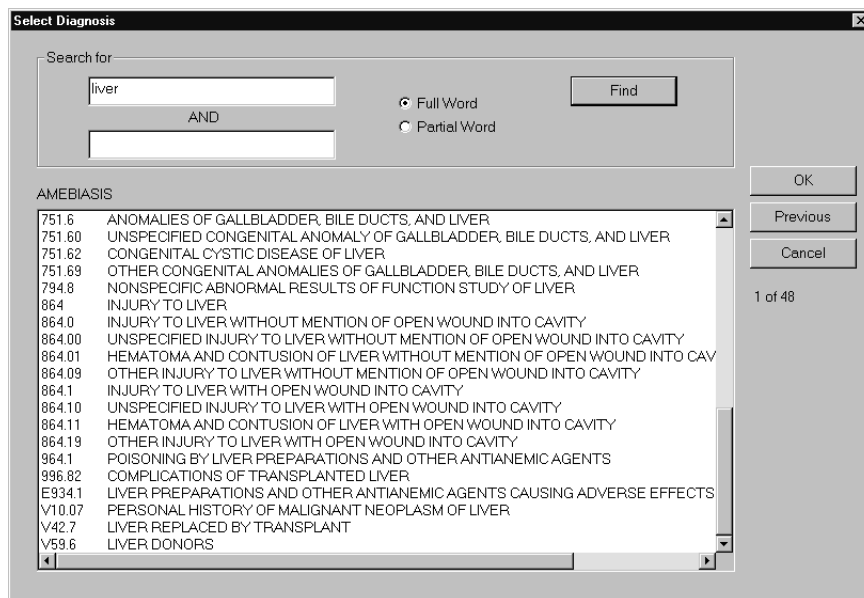
Figure 2-21. Search Results - One Full Word

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Full Word Search - Two Words

In the first Search for box, enter "liver" and select the Full Word option button. In the second Search for box, enter "alcoholic." Then, press the Find button. A search results dialog box appears with the list of list items containing the full words "liver" and "alcoholic" (Figure 2-22).

Figure 2-22. Search Results - Two Full Words

Partial Word Search

Example: In the Search for box, enter "liver" and select the Partial Word option button. Then, press the Find button. A search results dialog box appears with the list of list items containing the partial word "liver" (i.e., "delivery" (Figure 2-23).

Figure 2-23. Search Results - One Partial Word

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**Input Device
Selection
Procedures**

When the instructions in this manual tell you to make a selection from a list, use the method in Table 2-21 that corresponds to your input device.

Sample Instruction: Select one or more diagnoses on the Surgery & Anes. page of the Admission section.

Table 2-21. Making Selections from a Pick List

Input Device	Method
Touch Screen	Tap the Add button on the page to display a list in a dialog box. • If you see a list of check boxes, it is a single-level pick list. Tap one or more list items and then tap the OK or Cancel button. • If you see a Select button (or there are no check boxes), it is a multiple-level pick list. Tap the Select button, if there is one. Now tap a selection in the list. Tap Next to display the next level list, then tap your selection. When you are done: tap OK to make the selection; tap Previous to view the prior level list; or tap Cancel to escape without making a selection.
Mouse	Click the Add button on the page to display a list in a dialog box. • If you see a list of check boxes, it is a single-level pick list. Click one or more list items and then Click the OK or Cancel button. • If you see a Select button (or there are no check boxes), it is a multiple-level pick list. Click the Select button, if there is one. Now click a selection in the list. Click Next to display the next level list, then click your selection. When you are done: click OK to make the selection; click Previous to view the prior level list; or click Cancel to escape without making a selection. *Shortcut:* Double-clicking a list item produces the same result as clicking the item and then clicking one of the buttons (Next and OK).
Key-board	Press the TAB key (SHIFT+TAB to move backward) until the Add button is highlighted. Then press the SPACE BAR. A dialog box appears: • If you see a list of check boxes, it is a single-level pick list. To check an item, use the ARROW keys to highlight the item, then press the SPACE BAR to select it. To check another item, repeat this procedure. When you are finished checking items, highlight the OK or Cancel button by pressing the TAB key (SHIFT+TAB to move backward), then press the ENTER key. • If you see a Select button (or there are no check boxes), it is a multiple-level pick list. Use the TAB keys to highlight the Select button or use the ARROW keys to select an item, then press the ENTER key. Use the Tab key to selected the Next button, and then press ENTER. Or, use the ARROW keys to highlight an item in the list, then press ENTER. Repeat until you have selected an item in the lowest-level list. When you are done, use the TAB key to select the following buttons: Previous or Next to continue searching; Cancel to escape without making a selection; OK to select the item.

Attachment Buttons

The Attachment buttons (Figure 2-24) appear on several screens throughout the Recorder program, including the History, Systems and Summary pages of the Pre-Op section; the Chart and Summary pages of the Holding section; the Summary page of the Intra-Op section; and the Chart, Systems, Discharge and Summary pages of the Post-Op section. An Attachment button allows you to view comments or remarks that are "attached" to an item. You can tell if an attachment has been entered because you will see a "paper" icon next to it in the window, as shown in Figure 2-24. If you select the icon, you can edit or add text to the attachment.
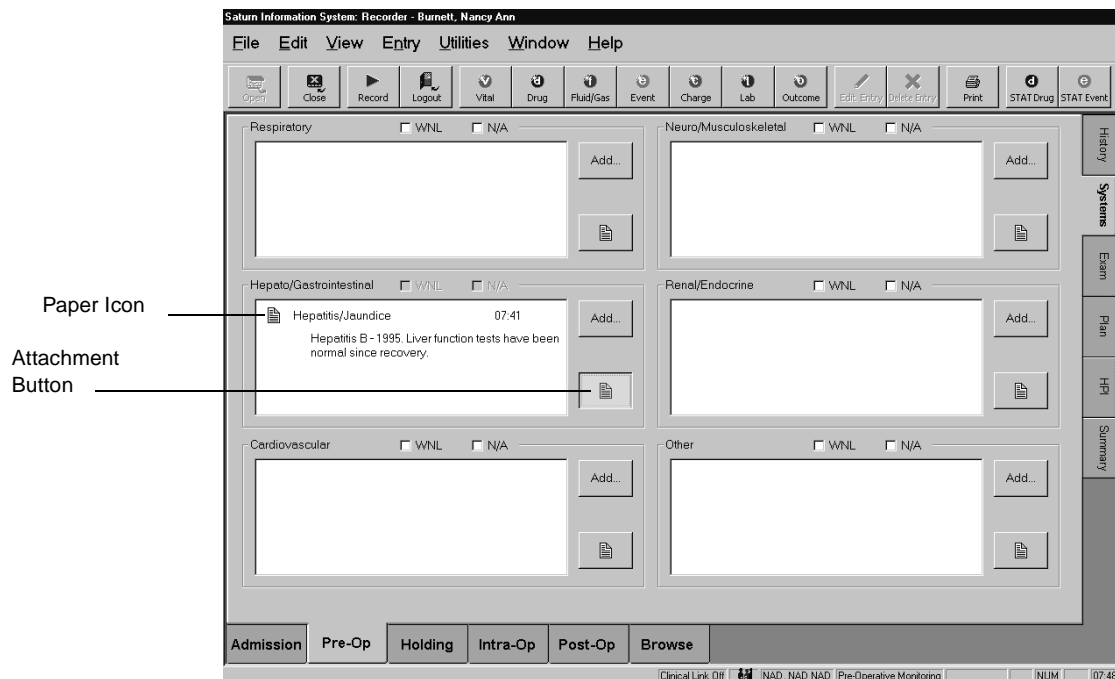
Figure 2-24. Attachment Button (Pre-Op Section, Systems Page)

To create an attachment for an item, double-tap or double-click the item in the window. Its Edit Entry dialog box appears (Figure 2-25). Type your comments in the Remarks box (up to 2,048 characters for data items on the toolbar as well as Score, Assess and Checks items; up to 255 characters for all other Remarks boxes). Then press the OK button. A "paper" icon appears next to the item (Figure 2-24). To view the remarks, press the Attachment button. Comments for any item with an icon appear. To hide the comments from view, press the Attachment button again.
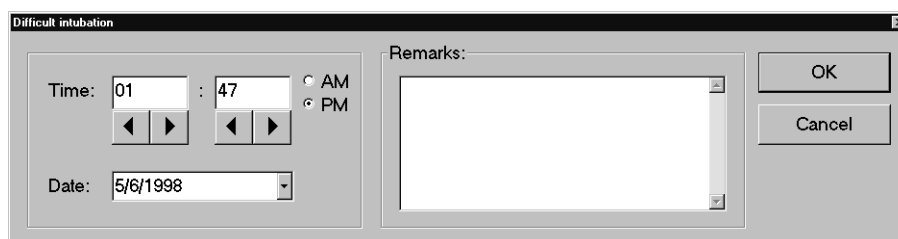
Figure 2-25. Edit Entry Dialog Box (Event)

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Comment Icons

Remarks (up to 2,048 characters) can be entered for every manually entered or automatically collected drug, vital, fluid/gas, lab, event, charge, and outcome. In addition, remarks can be added to a score, assessment and check item in their corresponding pages of the Post-Op section.

In all of the dialog boxes associated with entering these data items, there is a Remarks box (except for entering an Outcome, it is the Resolution box). When you type remarks in these boxes and select OK, a comment icon (small triangle) appears in the grid cell of a Chart, and in the Score, Assess and Checks pages in the Post-Op section. (Events, charges, and outcomes are displayed on Summary pages, but not on Charts.) When you double-click the grid cell, you can view, edit or delete the remark. Refer to the individual section (i.e., drugs, fluids, etc.) for viewing, entering, changing or deleting remarks.

Electronic Signatures

In various sections of the Recorder program, you may be required to enter an electronic signature or password when you are assigning other staff to a case, or when you are signing in to a case. The electronic signature (or password) is entered in the Electronic Signature dialog box, which is accessed by pressing a Sign button. Sign buttons appear in the following section pages of Recorder:

- Surgery & Anesthesia page of the Admission section
- Plan page of the Pre-Op section
- Chart of the Holding section
- Chart and Discharge pages of the Post-Op section

A staff with a user logon name and password can sign into a case several times while a case is open. For example, if a staff member logs in and then logs out of an open case, that staff person can log in again later. (Sign-in times appear next to the staff's name on the pages listed above, depending on the staff's optional group memberships.) In addition, a staff can delete his or her name from any of the pages in the above list if an electronic signature was used when the staff signed in.

The Sign button is disabled until a staff member is highlighted in the boxes located on the pages listed above.

Note: An electronic signature can be configured in the List Manager program for automatic data or manually entered vitals, drugs, fluids/gases, events, charges, labs and outcomes. Refer to "Password Restricted Data" on page 2-39 and your system administrator for details.

Procedure

Perform the following steps to enter an electronic signature.

1. Press the Edit button in the page of a Recorder section where you want to sign in to a case. Then select your name and press the OK button. An example is shown in Figure 2-26 on page 2-35.

Figure 2-26. Staff Sign-In Area, Surgery & Anes. Page, Admission Section

Sign-in time appears after completing steps 2 through 7.

2. Select (highlight) your name in the window. The Sign button is enabled (i.e., not dimmed).

3. Press the Sign button. The Electronic Signature dialog box appears (Figure 2-27).

Figure 2-27. Electronic Signature Dialog Box with Numeric Keypad

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4. Do one of the following:

   • In the Password box (Figure 2-28), type the password on the keyboard.

   • If the Password box has an arrow in it, a numeric keypad is displayed when you press it (see Figure 2-27 on page 2-35). You can click or press the numeric password and then press ENTER on the keypad. Click or press C on the keypad to clear any numbers if you need to start over.

5. Type the correct time in the Time boxes (the box on the left is hours, the one on the right is minutes). Or, use the left and right arrows below the Time boxes to enter the correct time (Figure 2-28).

Figure 2-28. Selecting the Sign-In Time

6. Select the AM or PM option button if they appear in the dialog box.

7. Press OK when you are finished, or press Cancel to start over.

   The time appears next to the name in the staff sign-in areas of the case (Figure 2-26 on page 2-35).

   Example: Surgeon Jeffrey Feldman signed in to the case on the Surgery & Anes. page of the Admission section using his electronic signature at 8:54 AM.

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Automatic Electronic Signature

When a user logs out of a case without closing the case, the User Logon dialog box appears automatically for the next user. A user can choose to add their name and electronic signature into the case automatically when this dialog box is used.

Prerequisite

A case must be open.

Procedure

Perform these steps to have your sign-in time recorded and your electronic signature added automatically to the various staff sign-in areas of the case.

1. Log out of the case by pressing the Logout button. This message appears (Figure 2-29):
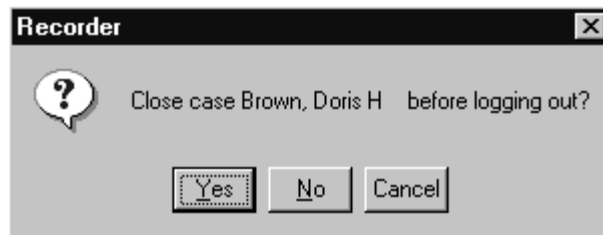
Figure 2-29. Logout Message when a Case is Open

2. Select the No button. The User Logon dialog box appears.
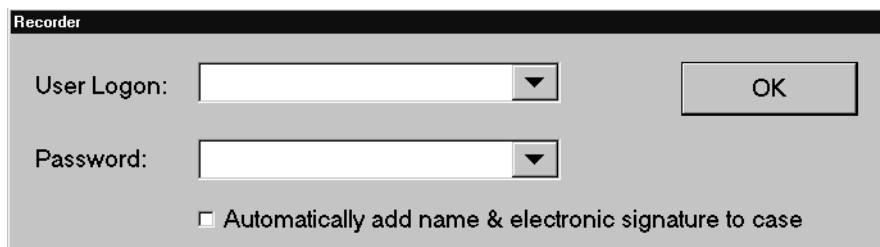
Figure 2-30. User Logon Dialog Box with Electronic Signature Option

3. Enter your logon name and password in the User Logon and Password boxes (refer to "Logging On to Recorder" on page 1-13 for more information).

4. Select the check box (Automatically add name & electronic signature to case) to add your name in the various staff sign-in areas of the case, as well as the time you signed in. Otherwise, you will need to enter them manually.

Example: Surgeon Jeffrey Feldman signed in to Doris H. Brown's case for the second time at 9:29 AM (Figure 2-26 on page 2-35). Feldman's name and the time he signed in now appear in the Surgeon(s) window on the Surgery & Anes. page of the Admission section, and in the Surgeon Review window on the Plan page of the Pre-Op section.

2 | Learning the Basics

Screen Saver

A Dräger screen saver is available on clinical workstations only. The screen saver is not controlled by a timer. Instead, you can select it from the Utilities menu each time you want to use it.

Prerequisite   You must be working at a clinical workstation, and the Recorder program must be open.

Procedure   Follow these steps to invoke the Dräger screen saver.

Depending on your input device, do one of the following (Figure 2-31):

Mouse	From the Utilities menu, click Launch Screen Saver.
Touch Screen	From the Utilities menu, press Launch Screen Saver.
Keyboard	On the keyboard, type ALT, U, V.
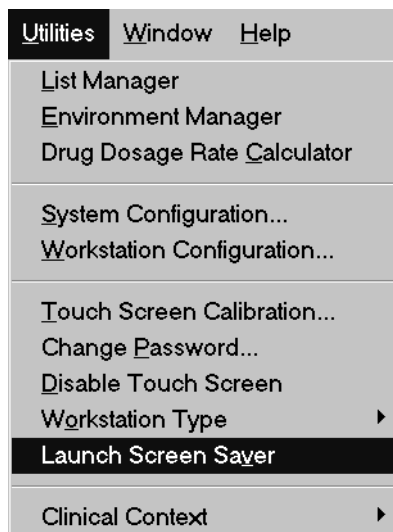
Figure 2-31. Launch Screen Saver Option on the Utilities Menu

The screen saver appears with the Dräger logo moving across the screen.

The screen saver disappears from the screen when you touch the keyboard, the touch screen, or mouse.

Password Restricted Data

When you enter data (i.e., drugs, fluids, charges, etc.), you may be required to record your password. Perform the steps below when the Enter Password dialog box appears on the screen while you are entering data.

Prerequisite A case must be open and the data item (i.e., drug, fluid, etc.) you just entered must have been configured with an electronic signature (i.e., the Enter Password dialog box appears).

Procedure
1. In the User Logon box, type your name or select it from the list (Figure 2-32).

2. In the Password box, type the password using the keyboard, or press the arrow and enter it on the drop-down numeric keypad.

   Note: To keep your password secure, the password box displays asterisks as you type.
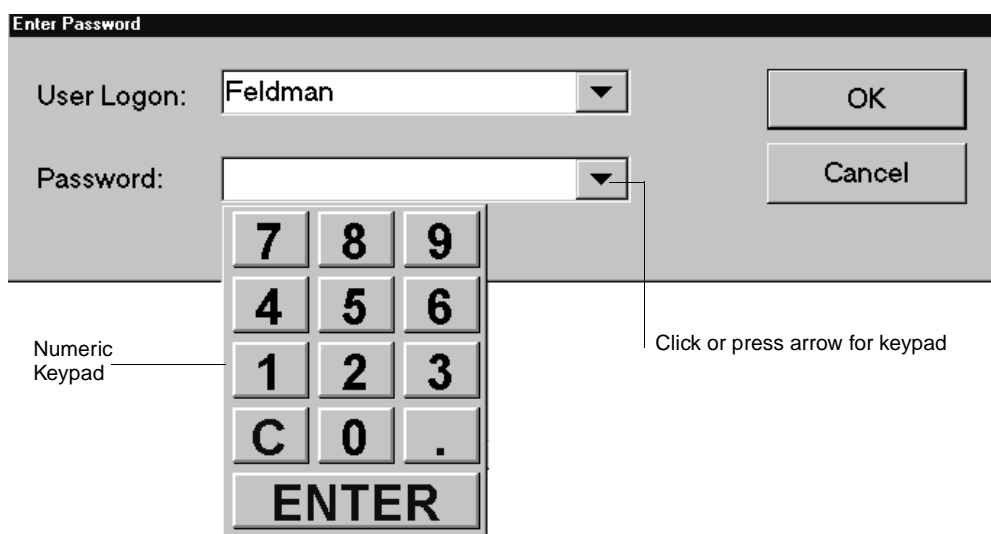
Figure 2-32. Enter Password Dialog Box

3. Press the OK button. The data is entered into the case.

2 Learning the Basics

3

Configuring the Workstation

This section explains how to view the configuration for the entire Saturn system and how to change configuration options for individual Saturn workstations.

Note: The Saturn Administrator configures the options for the entire Saturn system. However, you can configure the individual workstation (if you have Workstation Configuration security rights) by following the instructions in this section.

3 | Configuring the Workstation

Viewing System Configuration Options

System options apply to all of the workstations at your site. Recorder displays your system options, which are configured by your Saturn Administrator.

Prerequisites   The following prerequisite applies to viewing this function:

You must be logged on to Recorder.

Procedure   Follow this procedure to view the system configuration.

1. From the Utilities menu, choose System Configuration.

    The System Configuration dialog box is displayed with the General page on top (Figure 3-1).

Figure 3-1. System Configuration Dialog Box, General Page

Configuring the Workstation | **3**

2. Press the Required Fields tab to display the Required Fields page (Figure 3-2 on page 3-3). Fields and events that are marked "Required" will be evaluated for valid and complete data when a case is closed. The options are described in Table 3-2 on page 3-8.

Figure 3-2. System Configuration Dialog Box, Required Fields Page

3 | Configuring the Workstation

3. Press the Layout tab to display the Layout page (Figure 3-3 on page 3-4). This page enables you to configure the layout of the Anesthesia Record. The options are described in "System Configuration Layout Page" on page 3-10.

Figure 3-3. System Configuration Dialog Box, Layout Page

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Configuring the Workstation | **3**

System Configuration General Page

Table 3-1 describes system configurations relating to hospital, workstation, and machine default information that the Saturn Administrator edits in the Hospital, Workstations, and machine default areas (Units, Graph Background Colors, and Default Ambient Pressure) of the General page of the System Configuration dialog box.

Table 3-1. System Configuration - General Page Options

Option	Description
Hospital Area	
Name	The name of your facility, exactly as you want it to appear on all printed records and reports. *Default:* No default
Address 1	The first address line for your facility, exactly as you want it to appear on all printed records and reports. *Default:* No default
Address 2	The second address line for your facility, exactly as you want it to appear on all printed records and reports. *Default:* No default
City	The city or town where your facility is located, exactly as you want it to appear on all printed records and reports. *Default:* No default
State	The two-letter abbreviation for the state where your facility is located, exactly as you want it to appear on all printed records and reports. *Default:* No default
Zip	Your facility's zip code, exactly as you want it to appear on all printed records and reports. *Default:* No default
Labels Area	
Case Identification Label	The label to be used for the case identification box on the screens and on any printed output. *Default:* Admission Number
Patient Identification Label	The label to be used for the patient identification box on the screens and on any printed output. *Default:* Medical Record Number
Workstations Area	
Post Annotate Time Limit	When checked, indicates that the case can only be edited for a limited period of time after each time that recording is stopped. (You define the time limit in the Period box.) *Default:* Checked

Table 3-1. System Configuration - General Page Options (continued)

Option	Description
Period	The number of hours available for editing a case after it is closed. (This box is available only if the Post Annotate Time Limit box is checked.) *Default:* 48
Case Timer Length	The length of time, in hours, for the Case Timer. The timer is only active when recording automatic data. If it times out, recording will be stopped automatically. *Default:* 14
Automatic Logout Time	The number of minutes of allowed for inactivity at a logged-in workstation before the user is automatically logged out. *Default:* 60
Post-Anesthesia Recovery Score	The post-anesthesia recovery score required in order to discharge a patient. *Default:* 0
Global Environment	The environment to be used as a default environment for all cases. The Global Environment is the first environment loaded when a case is opened. Select the Global Environment check box and then choose the Select button. *Default:* No default
Units Area	
English or Metric	The units (English or Metric) by which values are to be represented in Recorder. *Default:* Metric
Graph Background Color Area	
Color	The background color of the graphs that appear on the Chart pages. *Default:* Gray
General Area	
Default Ambient Pressure	The ambient barometric pressure, including the unit of measure. Saturn uses the ambient pressure to compute gas values. It displays these gas values in the specified unit of measure on the screen and in printed reports. *Note:* If the monitor on the anesthesia machine supplies an ambient pressure to Saturn, the supplied pressure is used instead of the configured value. *Default:* 760 mmHg

Table 3-1. System Configuration - General Page Options (continued)

Option	Description
CCOW Application Key Name	The common name used in the configuration of all CCOW-enabled applications. The name can include up to 50 alphanumeric characters and underscores.
Prohibit case close when all events are not on record	Lets you select a check box to stop Recorder from closing a case when all of the events are not on the record. *Default:* Not checked
Prohibit printing with missing required fields	Lets you select a check box to stop Recorder from printing a report when all of the required fields are not on the record. *Default:* Not checked
Enable Browser	When not checked, a 'Browser is disabled' message is displayed when you select the Browse tab; everything is disabled in the Browse section of Recorder. When checked, you do not receive a message and everything in the Browse section of Recorder is enabled. *Default:* Not checked

3 | Configuring the Workstation

**System
Configuration
Required
Fields Page**

When a case ends, it is checked for valid data in the Required Fields and Required Events fields configured by the system administrator.

Required Fields Section

By selecting their check boxes, the following fields can be "required" data for the case record. The user is reminded to enter the data when attempting to close a case.

Table 3-2. System Configuration - Required Fields Page Options

Patient Name	The patient's name must be entered on the Demographics page of the Admission section.
Medical Record Number	The patient must be assigned a medical record number on the Demographics page of the Admission section.
Patent Gender	The patient's gender must be selected on the Demographics page of the Admission section.
Patient Age	The patient's age must be entered on the Demographics page of the Admission section.
Patient Weight	The patient's weight must be entered on the Demographics page of the Admission section.
Patient Height	The patient's height must be entered on the Demographics page of the Admission section.
Insurance	The patient's insurance type must be entered on the Demographics page of the Admission section.
Admission #	The patient's admission number must be entered on the Demographics page of the Admission section.
Admission Date	The patient's admission date must be entered on the Demographics page of the Admission section.
Admission Type	The patient's admission type must be entered on the Demographics page of the Admission section.
ASA Number	The patient's ASA number must be entered on the Plan page of the Pre-Op section.
Procedure Date	The patient's surgery date must be entered on the Surgery & Anes. page of the Admission section.
DRG	The patient's DRG must be selected on the Surgery & Anes. page of the Admission section.
Diagnosis	The patient's diagnosis must be entered on the Surgery & Anes. page of the Admission section.
Procedure	The patient's surgical procedure must be entered on the Surgery & Anes. page of the Admission section.

Table 3-2. System Configuration - Required Fields Page Options (continued)

Location Name	The patient's Intra-Op location must be entered on the Chart page of the Holding section.
Anesthesia Type	The patient's anesthesia type must be entered on the Surgery & Anes. page of the Admission section.
Anesthetist	The anesthetist assigned to the case must be entered on the Surgery & Anes. page of the Admission section.
Surgeon	The surgeon assigned to the case must be entered on the Surgery & Anes. page of the Admission section.
Complete Drug Entries	All drug entries must be complete.
Complete Fluid Entries	All fluid entries must be complete.
Completes STAT Entries	All STAT Event and STAT Drug entries must be complete.

Required fields appear tinted on the interface. If a required field is missing data or contains invalid data, or if a required event was not added to the case, Recorder displays a message dialog box (Figure 3-4) to inform you of the missing or invalid field or event information that is required before closing the case.

Figure 3-4. Missing Data Dialog Box

Required Events Area

Any events listed in List Manager can be selected as "required" in this section of the Required Fields page.

Order of Milestone Events Area

The Order of Milestone Events area of the Required Fields page enables you to order any of the events listed in the List Manager application. The configuration of these events will be reflected in the Recorder application.

3 | Configuring the Workstation

System Configuration Layout Page

Table 3-3 describes system configurations relating to the desired layout of the Anesthesia Record.

Table 3-3. System Configuration - Layout Page Options

Option	Description
Report Margin Area	
Left	The number of inches of the left margin for the Holding, Anesthesia, and post-Op Records. *Default:* No default
Top	The number of inches of the right margin for the Holding, Anesthesia, and Post-Op Records. *Default:* No default
Holding Record Form Number	
This box indicates the Holding Record Form Number label that will appear on the hospital's Anesthesia Record. *Default:* No default	
Intra-Op Record Form Number	
This box indicates the Intra-Op/OR Record Form Number label that will appear on the hospital's Anesthesia Record. *Default:* No default	
Post-Op Record Form Number	
This box indicates the Post-Op Record Form Number label that will appear on the hospital's Anesthesia Record. *Default:* No default	
Report Patient Information Location	
Left	Displays the patient information on the left side of the Post-Op reports (except Summary Report). *Note:* Currently not available.
Right	Displays the patient information on the right side of the Anesthesia Record. *Note:* Currently not available.

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Changing Workstation Configuration Options

Workstation options apply to the current Saturn workstation.

Prerequisite   You must be logged on to Recorder, and you must have Workstation Configuration security rights to change the workstation's configuration.

Procedure   Follow this procedure to change workstation options.

1. From the Utilities menu, choose Workstation Configuration.

   The Workstation Configuration dialog box is displayed with the General page on top.

2. If the General page is not displayed (Figure 3-5), press the General tab to display it.
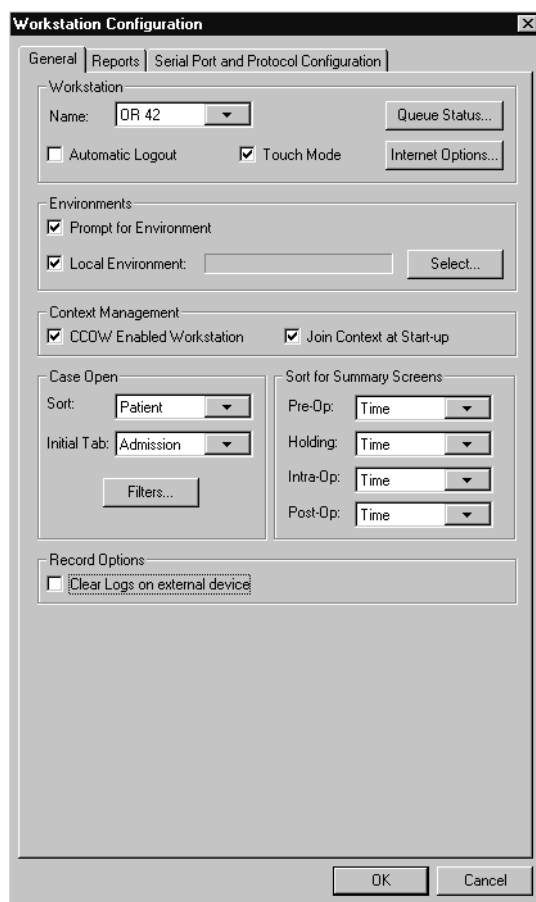
Figure 3-5. Workstation Configuration Dialog Box, General Page

3. Select the workstation configuration options for this workstation. The options are described in Table 3-4 on page 3-14.

3 Configuring the Workstation

4. **Select the Reports tab to display the Reports page (Figure 3-6).**

Figure 3-6. Workstation Configuration Dialog Box, Reports Page

5. **Select the reports that you want to be able to generate. The options are described in Table 3-3 on page 3-10.**

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6. Select the Serial Port and Protocol Configuration tab to display the Serial Port and Protocol Configuration page (Figure 3-7).

   Note: These options are available on a clinical workstation only.
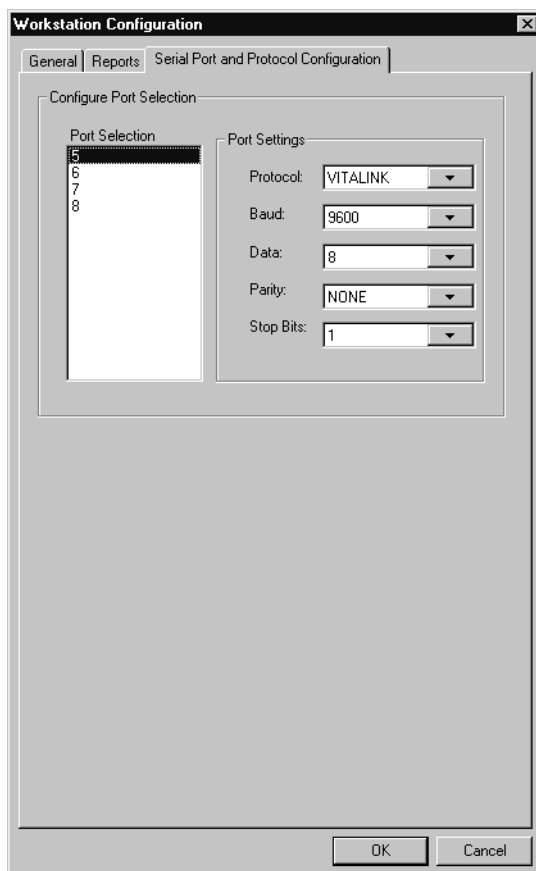
Figure 3-7. Workstation Configuration Dialog Box, Serial Port and Protocol Page

7. Select the serial port and protocol configuration options for this workstation. The options are described in Table 3-6 on page 3-17.

   Note: You can go back to previous pages and make more changes before going to the next step.

8. Press the OK button to save the changes.

3 | Configuring the Workstation

Workstation Configuration General Page Options

The following table describes the workstation options you can configure on the General page of the Workstation Configuration dialog box.

Table 3-4. Workstation Configuration - General Page Options

Option	Description
Workstation Area	
Name	The name of the current workstation. *Default:* The name of the current workstation as it appeared on the install screen.
Automatic Logout	When checked, indicates that the Automatic Logout system configuration option is overridden locally so that the Automatic Logout feature is enabled. *Default:* Checked (Automatic Logout is enabled.)
Touch Mode	When checked, large scroll bars and menus replace Recorder's smaller scroll bars and menus. *Defaults:* Clinical workstations - checked Nonclinical workstations - not checked
Queue Status Button	This button enables you to view the Replication Agent dialog box for troubleshooting purposes. *Default:* None
Internet Options Button	This button enables you to configure the Recorder Browse page. *Default:* None
Environment Area	
Prompt for Environment	Displays the Select Environment dialog box when a case is opened. *Default:* Checked (Automatically prompt for an environment when a case is opened.)
Local Environment	Allows you to select a local environment. The Local Environment is added to the Global Environment when a case is opened. The sublists for the local environment will replace those from the global environment. Press the Select button to display the Select Environment dialog box. *Default:* Not checked.
Context Management	
CCOW Enabled Workstation	Allows any user at this workstation to access the CCOW feature. This option must be selected for CCOW to be used on a workstation. *Default:* Not checked.

Configuring the Workstation | **3**

Table 3-4. Workstation Configuration - General Page Options (continued)

Option	Description
Join Context at Start-up	Enables the CCOW Patient Context Manager whenever this workstation is started or restarted. If this option is not selected, CCOW can still be accessed via the Utilities menu, as long as the CCOW Enabled Workstation option is selected. *Default:* Not checked.
Case Open Area	
Sort	The default sort order of cases when the Case Open dialog box is displayed. The sort order selections, listed in a drop-down list, are: Admission ID, Anesthetist, Date, Location, Patient, and Status. *Default:* Date
Initial Tab	The section tab of Recorder that appears on top when a case is opened. The section tab selections, listed in a drop-down list, are: Admission, Pre-Op, Holding, Intra-Op, and Post-Op. *Default:* Admission
Filters Button	Displays the Show dialog box (Figure 4-8 on page 4-9), which enables you to select the way in which you want cases to appear in the Open Case dialog box (Figure 4-7 on page 4-8).
Sort for Summary Screens Area	
Pre-Op	Summary screens for items selected in the Pre-Op pages are available for review according to group, name or time. *Default*: Time
Holding	Summary screens for items selected in the Holding pages are available for review according to group, name, or time. *Default*: Name
Intra-Op	Summary screens for items selected in the Intra-Op pages are available for review according to group, name, or time. *Default*: Time
Post-Op	Summary screens for items selected in the Post-Op pages are available for review according to group, name, or time. *Default*: Group
Record Options Area	
Clears Logs on external device	When checked, indicates that the logs of any Draeger Medical, Inc. external devices to the workstation will be cleared. *Default*: Not checked

3 | Configuring the Workstation

Workstation Configuration Reports Page Options

The following table describes the workstation configuration options for the Reports page. The default for each option is "not checked" and the default number of copies to print is "1." However, each option allows you to select a higher number of copies to print. Refer to Section 20 for more information on the content of these reports.

Table 3-5. Workstation Configuration - Reports Page Options

Option	Description
Pre-Op Area	
History Report	Allows you to print a report of the History page data.
Systems Report	Allows you to print a report of the Systems page data.
Exam & Plan Report	Allows you to print a report of the Exam page and Plan page data.
HPI	Allows you to print a report of the patient's history of present illness data entered on the HPI page.
Summary	Allows you to print a Summary report of the patient's Drugs, Vitals, Systems, Events, Charges, Fluids, Outcomes, Labs, and History.
Holding Area	
Record	Allows you to print a report of the Chart page.
Summary	Allows you to print a Summary report of the patient's Drugs, Vitals, Events, Charges, Fluids, Outcomes, Labs, and Status.
Intra-Op Area	
Record	When checked, the system prints the Anesthesia record. You can select the number of copies of the record to be printed.
Summary	Allows you to print a Summary report of the patient's Drugs, Vitals, Events, Charges, Fluids, Outcomes, and Labs.
Post-Op Area	
Record	Allows you to print a report of the Chart page.
Systems Report	Allows you to print a report of the Systems page.
Score Report	Allows you to print a report of the Score page.
Assessment Report	Allows you to print a report of the Assess page.
Checks Report	Allows you to print a report of the Checks page.
Discharge Report	Allows you to print a report of the Discharge page.

Table 3-5. Workstation Configuration - Reports Page Options

Option	Description
Summary	Allows you to print a Summary report of the patient's Drugs, Vitals, Systems, Acknowledgement, Events, Charges, Checks, Fluids, Outcomes, Discharge, Assessments, Labs, and Scores.

Workstation Configuration Serial Port & Protocol Options

Table 3-6 describes the serial port and protocol options for the Serial Port and Protocol Configuration page.

Note: If Saturn is configured to support two of the same protocol (e.g., Vitalink, MECIF, etc.) and there is a redundant physiological data label (e.g., SP02, HR, P1, etc.), Saturn will handle the data as follows:

- Saturn will only show and store one source of the redundant physiological data label. Saturn does not indicate which redundant protocol port received the data. Only the normal protocol designation will be seen on the trend legend or in the grid area.

- If the currently displayed data source becomes invalid, Saturn will display the alternate data source.

Table 3-6. Workstation Configuration - Serial Port and Protocol Page Options

Option	Description
Configure Port Selection Area	
Port Selection	The number of the port that you choose to configure. *Default:* The first port in the list.
Port Settings Area	
Protocol	The protocol that is used by the selected port. *Default:* The default is set by the System One installation process.
Baud	The data transmission speed that is used by the selected port. Options include 1200, 2400, 4800, 9600, 19200, and 38400. *Default:* The default is set by the System One installation process.
Data	The number of data bits that make up each transmitted data unit. Options include 7 and 8. *Default:* The default is set by the System One installation process.
Parity	The process to be used to detect transmission errors. Options include None, Even, and Odd. *Default:* The default is set by the System One installation process.

3 | Configuring the Workstation

Table 3-6. Workstation Configuration - Serial Port and Protocol Page Options

Option	Description
Stop Bits	The measurement that signifies when one character ends and the next begins. Options include 1 and 2. *Default:* The default is set by the System One installation process.

Configuring the Touch Screen

The Utilities menu lets you configure your workstation's touch screen.

Prerequisites

- You must be logged on to Recorder.

- Your workstation must be configured to use a touch screen.

Procedure

Follow this procedure to change touch screen options.

Note: The OK, Cancel, and Apply buttons exist on every page of the Elo Touchscreen Properties dialog box.

- The OK button saves any changes that you make to the touch screen configuration.

- The Cancel button exits you from the Elo Touchscreen Properties dialog box without saving any changes that you made.

- The Apply button applies changes that you made in the Elo Touchscreen Properties dialog box. However, these changes are only saved if you press the OK button.

1. From the Utilities menu, choose Touch Screen Calibration.

The Elo Touchscreen Properties dialog box appears with the General page displayed (Figure 3-8 on page 3-19).

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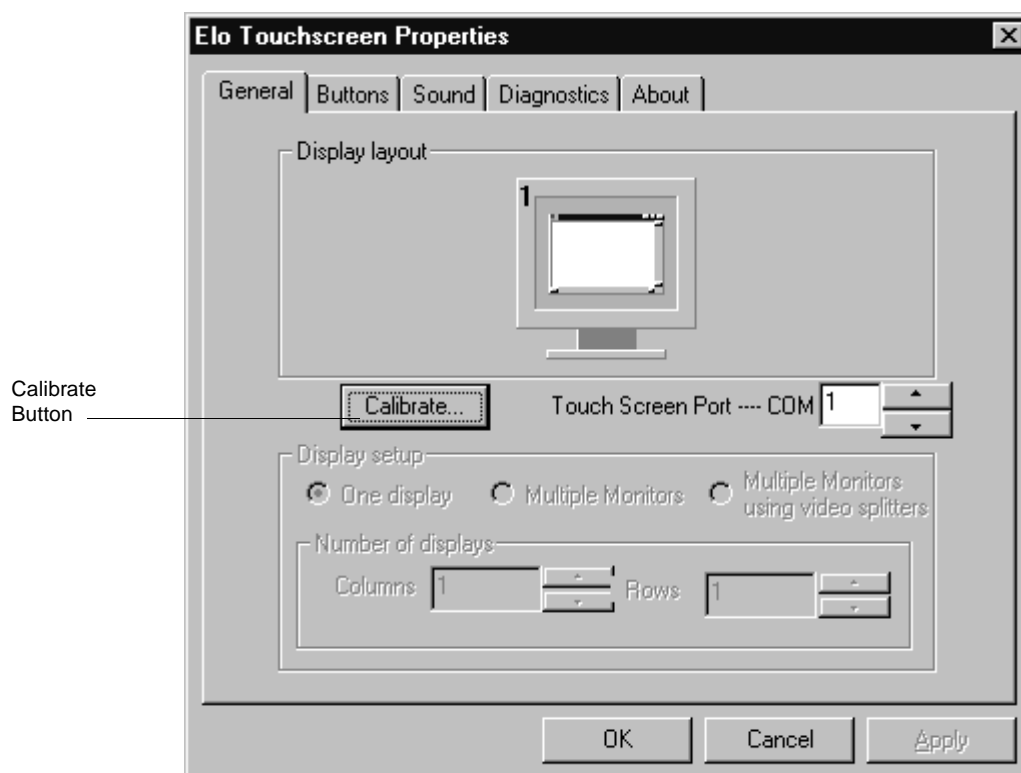
Figure 3-8. Elo Touch Screen Dialog Box, General Page

The General page lets you calibrate and configure the touch screen display.

Note: Items that are dimmed are not selectable because they were configured during system installation.

2. Press the Calibrate... button (see Figure 3-8) to display the Calibration screen (Figure 3-9 on page 3-20).

3 | Configuring the Workstation

Target icon

Touch the targets from a position of normal use.
Press Esc key to skip to next touch screen.
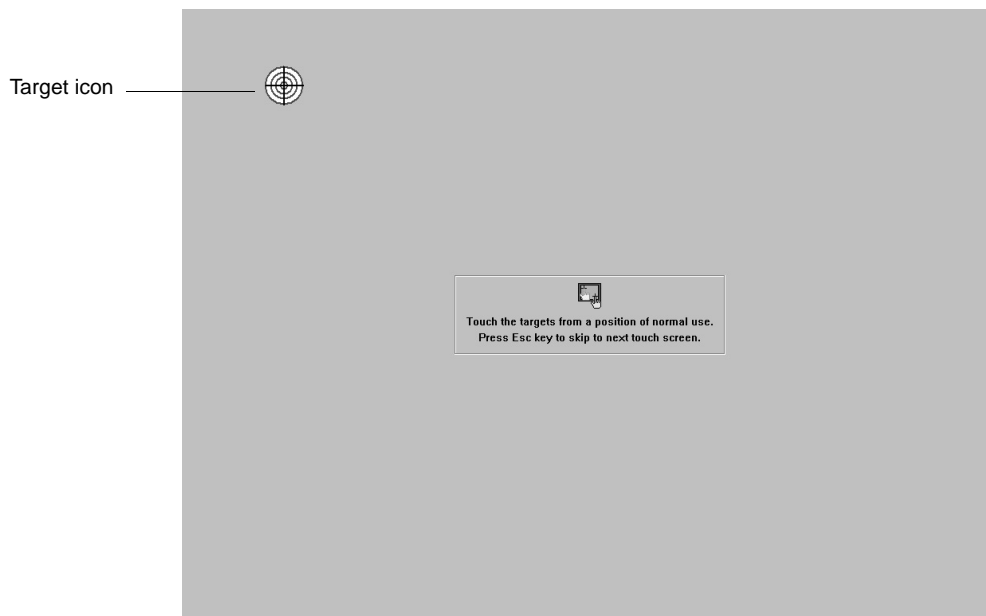
Figure 3-9. Calibration Screen

3. Touch the target icons (Figure 3-9) using your finger or pointer device until the Check Calibration dialog box appears (Figure 3-10).

Important: If the calibration software is interrupted and it appears as if the system is locked (i.e., the touch commands are not functioning when you touch them), you may have miscalibrated. The software will time-out and the previous settings will take effect. Press the ESC key, then go back to step 1 and try again.

Check Calibration

Touch different areas on the screen.
Does the cursor jump to your fingertip?

Calibrate will cancel in 30 seconds.
Press Esc key to cancel now.

Yes   No
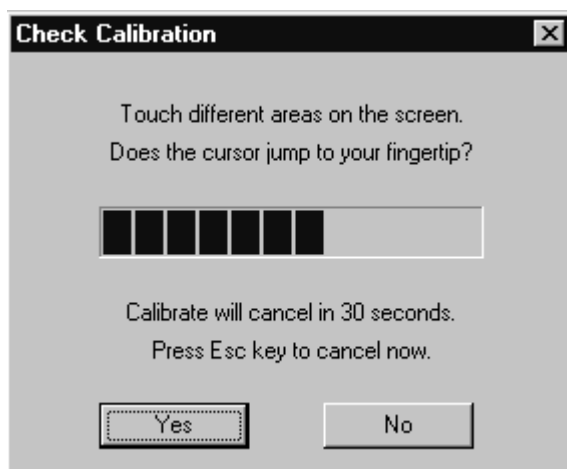
Figure 3-10. Check Calibration Dialog Box

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4. Touch the screen several times to ensure the cursor/pointer appears on the screen after you have touched it. In about 30 seconds, the General page of the Elo Touchscreen Properties dialog box reappears. Press OK.

5. Press the Buttons tab to display the Buttons page (Figure 3-11).
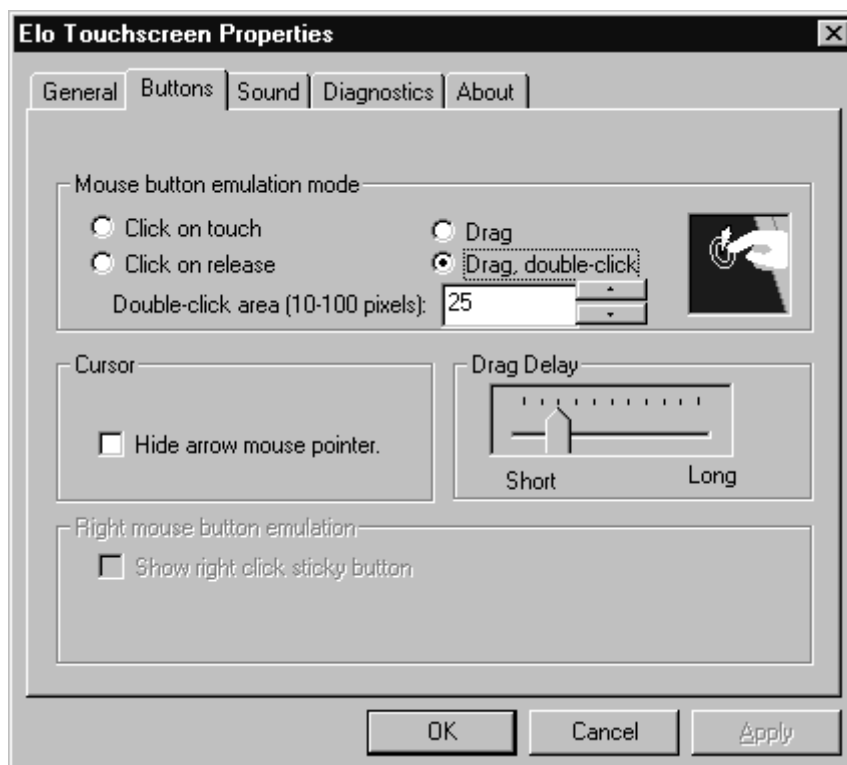
Figure 3-11. Elo Touch Screen Dialog Box, Buttons Page

The Buttons page lets you configure the functionality of the mouse and the cursor.

6. Press the Sound tab to display the Sound page (Figure 3-12 on page 3-22).

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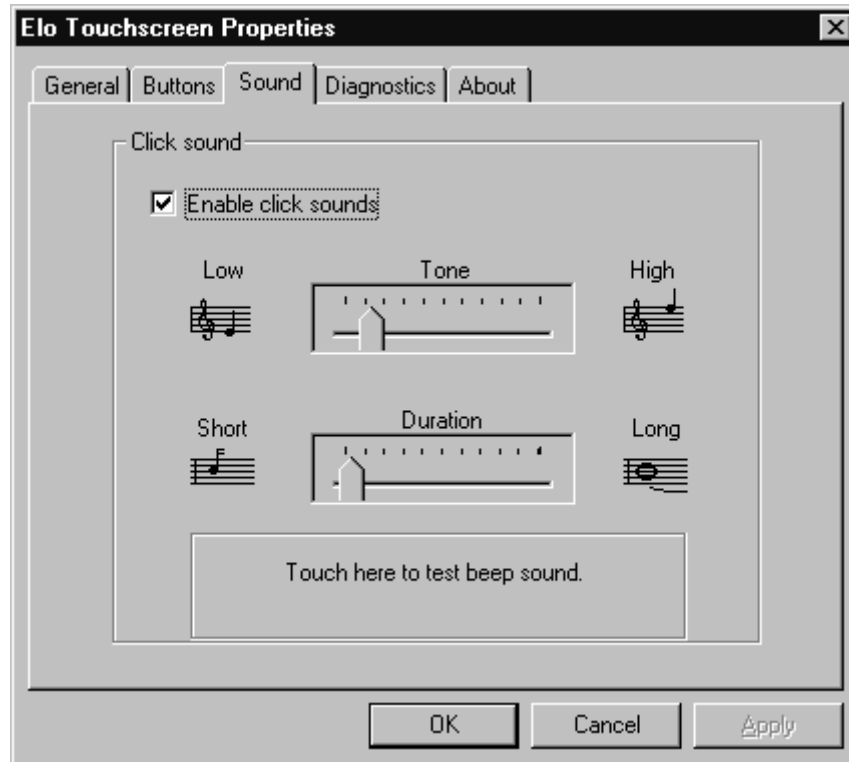
Figure 3-12. Elo Touch Screen Dialog Box, Sound Page

The Sound page lets you configure the sounds produced when you touch the touch screen.

7. **Press the Diagnostics tab to display the Diagnostics page (Figure 3-13).**
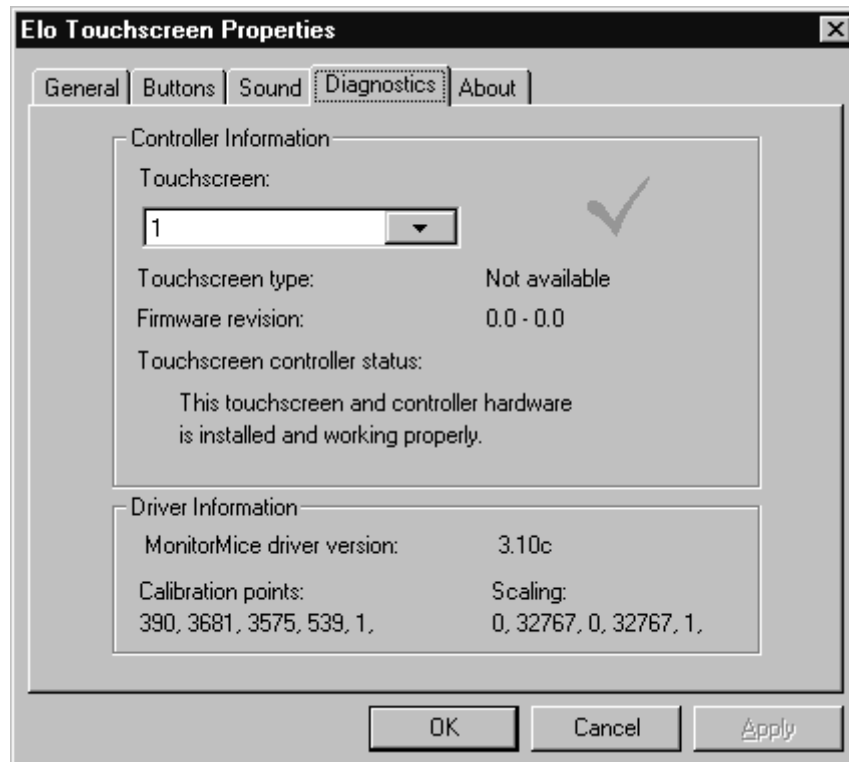
Figure 3-13. Elo Touch Screen Dialog Box, Diagnostics Page

The Diagnostics page lets you view the touch screen's controller and driver information.

3 | Configuring the Workstation

8. Press the About tab to display the About page (Figure 3-14).

Figure 3-14. Elo Touch Screen Dialog Box, About Page

The About page displays version and copyright information.

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Disabling the Touch Screen

The Utilities menu lets you disable your workstation's touch screen for a short period of time (for cleaning, etc.).

Prerequisites
- You must be logged on to Recorder.
- Your workstation must be configured to use a touch screen.

Procedure

Follow this procedure to change workstation options.

From the Utilities menu, choose Disable Touch Screen.

The Disable Touchscreen box appears (Figure 3-15), enabling you to clean your touch screen without interfering with the application.
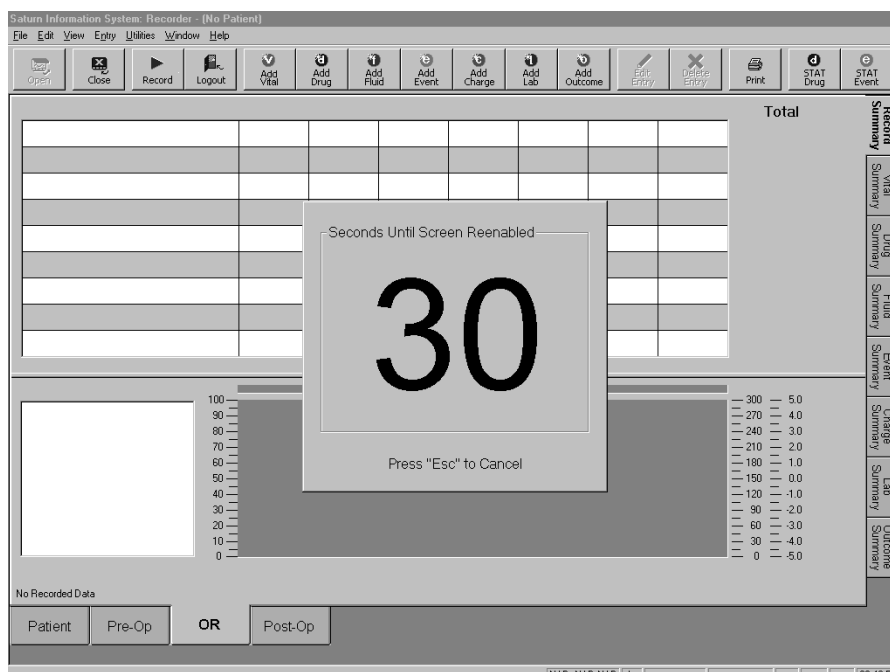
Figure 3-15. Disable Touch Screen

3 | Configuring the Workstation

Changing Your Password

The Utilities menu allows the currently logged-in user to change a password.

Prerequisites You must be logged on to Recorder.

Procedure Follow this procedure to change your password.

1. From the Utilities menu, choose Change Password.

   The Change Password dialog box appears (Figure 3-16).

Figure 3-16. Change Password

2. Enter your user name, old password, new password, and then confirm your new password in the Confirm New Password box.

   *Note:*Passwords appear as asterisks to protect confidentiality.

3. Press the OK button to save the password change.

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4

Beginning a Case

This section explains what you need to do to begin a case.

4 | Beginning a Case

Selecting a Workstation Type

Depending on the Saturn components purchased by your health care organization, you can change a workstation type (i.e., Pre-Op, Holding, Intra-Op, and Post-Op) from the Utilities menu. Changing the workstation type allows you to view, change, delete, or add data in the various sections of Recorder, depending on the security rights assigned to you.

Note: The workstation *configuration* is not affected when you change the workstation type.

Prerequisites
- You must be a valid Saturn user with a password.
- All cases must be closed.

Procedure Follow these steps to change a workstation from one type to another.

1. At the Recorder Main window (Figure 1-5 on page 1-15), select Workstation Type from the Utilities menu. The workstation type options appear (Figure 4-1):
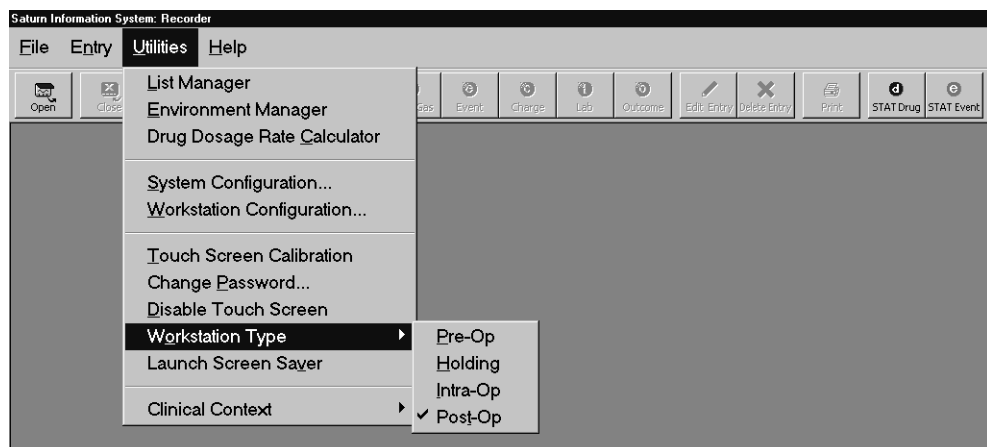
Figure 4-1. Workstation Type Option on the Utilities Menu

2. Select one of the following:

Pre-Op   Allows you to view, add or change preoperative data.
Holding   Allows you to view, add or change holding data.
Intra-Op   Allows you to view, add or change OR data.
Post-Op   Allows you to view, add or change postoperative data.

A message similar to this appears:
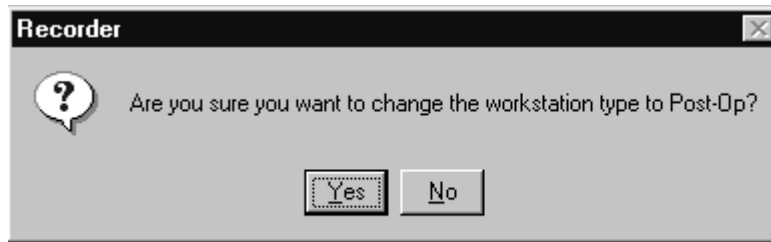
Figure 4-2. Example Workstation Type Message

3. Select one of the following:

- If you select Yes, the workstation changes to the type you selected.
- If you select No, the workstation type is not changed.

4. Repeat step 1 to verify that the workstation type you chose now has a check mark next to it in the Workstation Type list.

Depending on your security rights, you now will be able to view, change or add manually or automatically collected data in the corresponding section of Recorder.

About Loading Environments

Environments are created by your system administrator using the Environment Manager program. The first time you open a case, you may be required to "load an environment."

An environment is a set of characteristics that your health care organization has chosen to be used in a specific health care setting. For example, an environment named "Cardiac" might consist of particular drugs, fluids, labs, charges and events that would be specific to the preoperative, holding, OR and postoperative phases of heart surgery. Another environment might exist for procedures related only to obstetrics and gynecology, and so on.

Steps for selecting an environment are included in the following sections.

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Creating a New Case

Under normal circumstances, you must create a new case before you can enter or automatically record data for the case. However, in an emergency you can begin recording information immediately and then go back and enter the rest of the case data later. See *Shortcuts* on page 4-7 for details.

Prerequisites
- You must be logged on to Recorder.
- You must be authorized to create a new case.
- At clinical workstations, a case must be closed before you can create a new one.
- At nonclinical workstations, 10 cases can be open at a time.

Procedure   Follow these steps to create a new case.

1. On the toolbar, press the Open button. When the Open Case dialog box appears, press the New Case button.

   –Or–
   On the File menu, choose New Case.

   –Or–
   On the keyboard, press CTRL+N.

   The Select Environment dialog box appears (Figure 4-3) if "Prompt for Environment" was selected in the Workstation Configuration dialog box.

   Note: If the Open toolbar button or New Case dialog box button is disabled, you may not be authorized to create or open a case, or you may be at a clinical workstation where another case is already open.

Column Headers

Speed Search Text Box
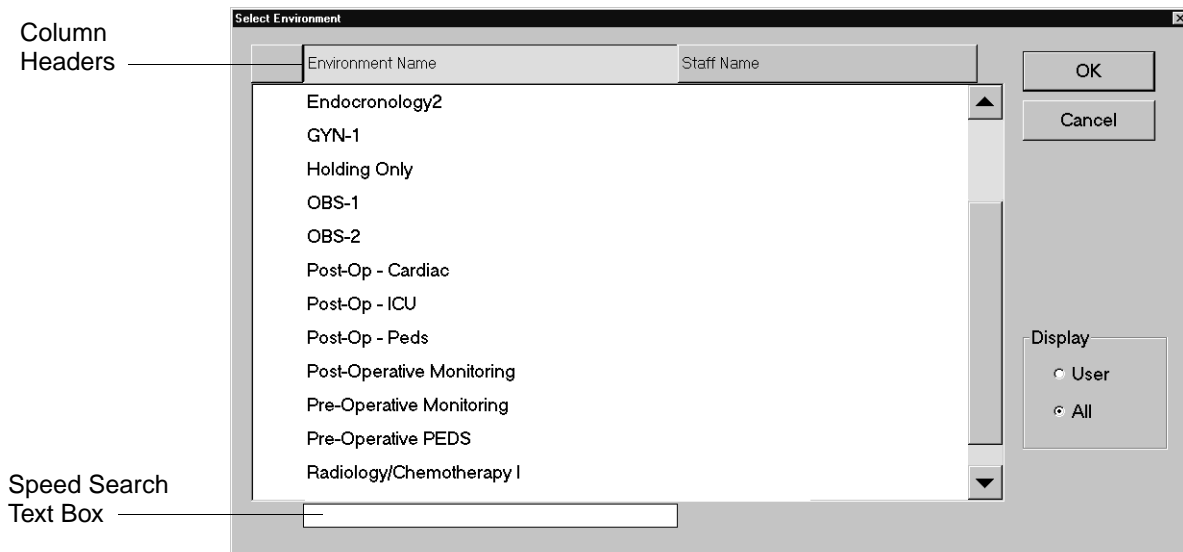
Figure 4-3. Select Environment Dialog Box (Showing Example Environments)

Note: If the Environment dialog box does not appear and you want to load one, select Load Environment from the File menu. If you do not want to load an environment, the Saturn program opens (see Figure 4-4).

2. Select the User option button to display the environments created only by you. Select the All option button to display all environments.

3. To select an environment, do any of the following:

   • Highlight an environment in the list by using the scroll bars (they appear only if the list surpasses the window size), and then press the OK button.

   • To search through a long list, you can press the Environment Name or Staff Name column header, which reorganizes the lists alphabetically (by environment name or staff name). If you press the header again, the lists are displayed in reverse (i.e., z through a). When you find the environment, select it and press the OK button. Or,

   • If you know the environment name, type the first few letters on the keyboard. These letters appear in the speed search text box. (There is no insertion point in the speed search box. Just type the letters.) The environment(s) that contain these initial letters appear on the screen. Select the one you want, and press the OK button.

   Note: If you press Cancel, no environment is loaded.

   The first screen that appears — after you have selected an environment or pressed the key sequences described above — depends on the Initial Tab setting in the workstation configuration. An example first screen for a new case is shown in Figure 4-4.

Figure 4-4. Blank Admission Section (No Patient)

4. If the patient has been to your facility and is in the database already, you can load the patient's demographic information into Recorder by pressing the

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Lookup button from the blank Admission section screen (Figure 4-4). The Select Patient dialog box appears (Figure 4-5).
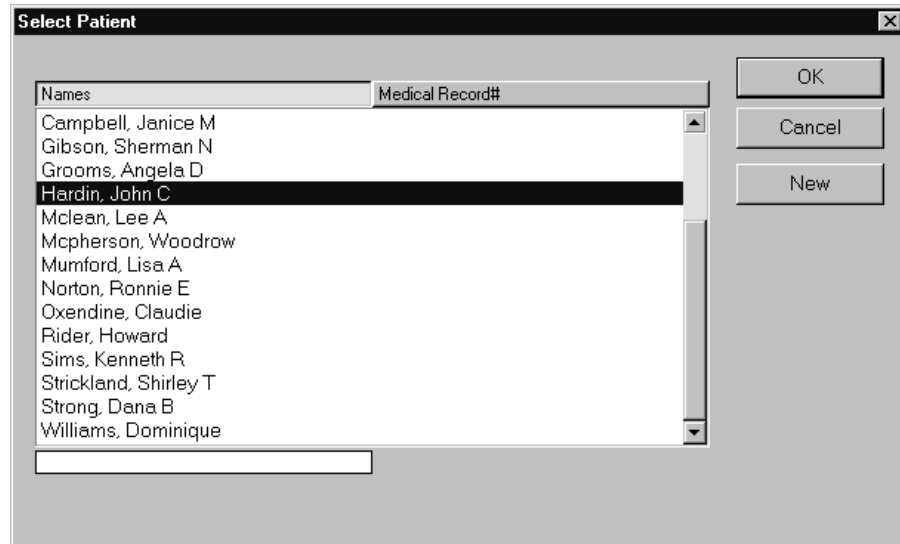
Figure 4-5. Select Patient Dialog Box

5. Select the patient from the list using the same guidelines outlined in step 3, and then press the OK button. This message appears if the case is open at another machine (Figure 4-6):
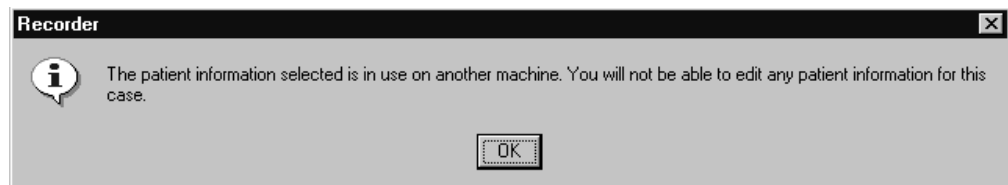
Figure 4-6. Case In Use Message

Otherwise, the patient's demographic information is automatically loaded into the entry boxes (Figure 4-4 on page 4-5) and the new case is established.

–Or–

In the Last box (Figure 4-4 on page 4-5), enter the patient's last name. When you tab to the next box, and if the patient has been to your facility and is in the database, the Select Patient dialog box appears. Selecting the patient from the Select Patient dialog box and pressing the OK button loads the patient's demographic information into the entry boxes and establishes the case.

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If the patient has not been to the facility and is not in the database, entering the patient's last name and tabbing to the next box does not display the Select Patient dialog box, but it does establish the case. You can enter additional information in the Admission section, or open another section by pressing another tab.

Shortcut:

In an emergency, use the following shortcuts to begin working immediately with a case:

- Select the Workstation Type from the Utilities menu (if necessary), then open a new case and press the Record button without entering the Admission data. When you start recording data (automatically or manually), the case is created. You can enter Admission data later. For details, see "Recording a Case" on page 4-16.

- Use the STAT functions to enter critical drug and event data before establishing a case. For more information, see "Entering Data STAT" on page 4-19.

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Opening an Existing Case

When you want to view or enter information in an existing case, you can open the case by selecting it from a patient list.

Prerequisites The following prerequisites apply to this function:

- You must be logged on to Recorder.
- You must be authorized to open a case. If the Open button is disabled, you may not be authorized to create or open a case, or you may be at a clinical workstation where another case is already open.
- If the case you want to open is open at another workstation, you can only view the case. (Cases opened by other users have the Locked Case icon next to them. Refer to "Case Types and Icons" on page 4-15.) If you intend to enter new data or modify existing data in the case, the case must not be open at any other workstation.

Procedure Follow these steps to open an existing case.

1. On the toolbar, press the Open button.

   –Or–
   On the File menu, choose Open Case.

   –Or–
   On the keyboard, press CTRL+O.

   Note: If the Select Environment dialog box appears, you may load an environment for the case. Refer to step 2 in "Creating a New Case" on page 4-4, and then return to this step.

   The Open Case dialog box appears (Figure 4-7).
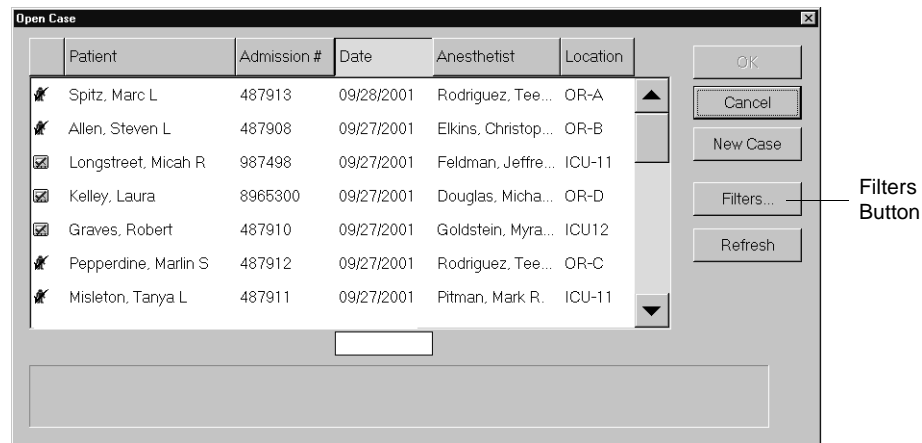
Figure 4-7. Open Case Dialog Box

2. If the Open Case dialog box is empty or you want to filter the list, press the Filters button. The Show dialog box appears (Figure 4-8 on page 4-9):
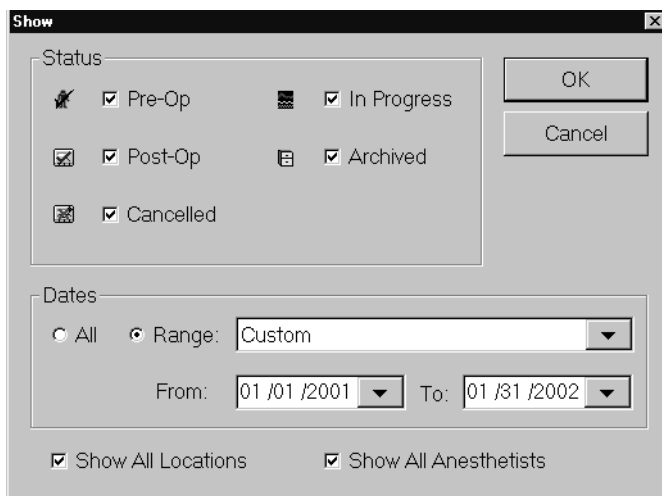
Figure 4-8. Show Dialog Box

The Show dialog box lets you generate a list of cases based using certain filters. The different filters are: case status (Pre-Op, In Progress, Post-Op, Archived or Canceled); a date, or a range of dates; locations; and anesthetists.

Note: The default settings for these filters are assigned in the Workstation Configuration. See "Changing Workstation Configuration Options" on page 3-11 for more information.

One or more filters can be selected. Refer to Table 4-1 for a complete description of each filter.

Table 4-1. Show Dialog Box Options

Option	Description
Status Area	Lists options for selecting types of cases by category.
Pre-Op	Displays a list of cases where patient data has been entered, but the case is not yet complete.
Post-Op	Displays a list of cases where surgery is finished, the data has been recorded, and the case is closed.
Cancelled	Displays a list of cases that were begun and then cancelled.
In Progress	Displays a list of cases that are open and recording.
Archived	Displays a list of cases that have been closed.

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Table 4-1. Show Dialog Box Options (continued)

Option	Description
Dates	Allows you to select options from the drop-down list, or to enter a custom date range.
All	Selecting this option button allows you to select from a list of all cases in the current Saturn database.
Range	Selecting this option button allows you to select a date range from the drop-down list. Options include: Calendar 1st Half, Calendar 2nd Half Calendar 1st (2nd, 3rd, 4th) Qtr Last 4 Weeks to Sun(day), Last 7 Days, Last Full Month, Last Full Week, Last Year MTD (Month To Date), Last Year YTD (Year To Date), Month To Date, Next 7 Days, Today, Tomorrow, Week To Date From Sun(day), Year To Date, Yesterday, and Custom (see Custom below). To select a date range from the list, click on the list box arrow and highlight an option. The From and To dates cannot be edited.
Custom	Selecting this option button allows you to enter a custom range. Custom must be selected from the drop-down menu, then dates must be entered in the From and To list boxes by pressing the arrows and choosing the dates on the calendar, or by typing the dates using the keyboard. If invalid dates are entered, an error message appears. Re-enter valid dates and try again.
Show All Locations	Displays a list of all cases in all locations, as allowed by your system administrator. When not checked, only cases for your location are displayed.
Show All Anesthetists	Displays a list of all cases with all anesthetists. When not checked, displays cases only where the logged on staff is the primary anesthetist, or where no primary anesthetist is assigned.

Note: If you selected Range in the Dates area, perform step 3. Otherwise, go to step 4.

3. In the list box above the From and To boxes in the Dates area, press the arrow. The following menu appears:

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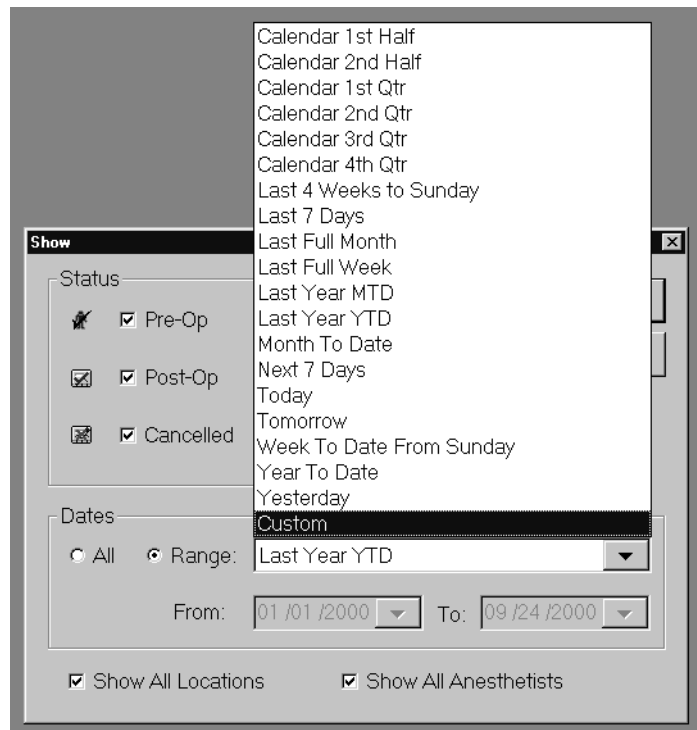
Figure 4-9. Selecting a Custom or Other Date Range

Refer to "Dates" in Table 4-1 on page 4-8 for selecting a date range.

4. After making selections in the Show dialog box, press the OK button. (Or press Cancel to start over.) The Open Case dialog box reappears and displays a patient case list based on the selections you just made in the Show dialog box (Figure 4-7 on page 4-8).

Note: An error message appears if the To date is sooner than the From date. Re-enter valid dates and repeat step 3.

Example: If you entered October 1, 2002 in the From box (i.e., the beginning of the period), and April 15, 2002 in the To box (i.e., the end of the period), you will not be able to generate a patient case list.

5. Double-click a case from the list, or select it, and then press the OK button.

Note: If the Select Environment dialog box appears, you may load an environment for the case. Refer to steps 2 and 3 in "Creating a New Case" on page 4-4, and then return to this step.

The page configured to be displayed when a case is opened now appears (see "Viewing System Configuration Options" on page 3-2). Figure 4-10 on page 4-12 shows the Demographics page of the Admission section. You can update information in the Admission section or in another section of the case, depending on your security rights.

If you have a problem: If you receive the message shown in Figure 4-6 on page 4-6, the case is already open at your workstation or at another workstation. You can open it to view it, but you cannot update it.

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Figure 4-10. Admission Section for an Existing Case

Shortcuts:

In an emergency, use the following shortcuts to begin working immediately with a case:

- Open a new case and press the Record button without filling in Admission data. When you start recording data (automatically or manually), the case is created. You can fill in Admission data later. For details, see "Recording a Case" on page 4-16.

- Use the STAT functions to enter critical drug and event data before creating or opening a case. For more information, see "Entering Data STAT" on page 4-19.

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Changing the Medical Record No.

When you open an existing case and change the patient's medical record number on the Demographics page of the Admission section, you are prompted as to whether you want to establish a new case, or edit the existing one (Figure 4-11).
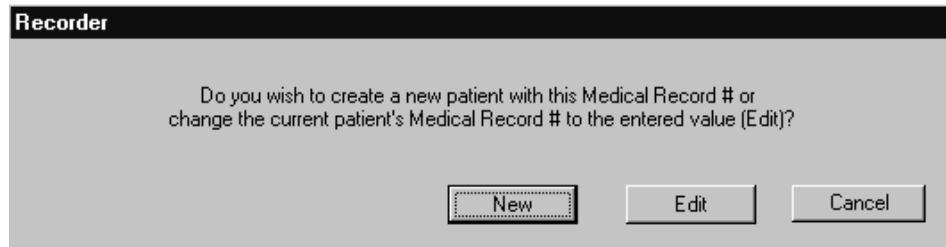
Figure 4-11. Change Medical Record Number Dialog Box

Procedure

Select one of the following when the Change Medical Record Number dialog box appears:

• Select the New button to establish a new patient case (besides the one you just opened) using the medical record number now entered in the Medical Record # box on the Demographics page of the Admission section.

• Select the Edit button to change the medical record number from the one that appeared when you opened the case, to the one now entered in the Medical Record # box.

• Select the Cancel button if you want the original medical record number (when you opened the case) reentered automatically in the Medical Record # box.

Opening Several Cases at a Time

Up to 10 cases can be open at the same time on a nonclinical workstation. These open cases can be managed easily on the screen using the Window menu on the Recorder menu bar.

Prerequisite

You must be using a nonclinical workstation to open more than one case.

Procedure

Follow these steps to open and display two or more cases.

1. Open up to 10 new or existing cases according to the procedures in "Creating a New Case" on page 4-4 and "Opening an Existing Case" on page 4-8.

2. On the Window menu, select one of the following:

Cascade	Arranges cases in an overlapping manner so that only the title bars can be seen beyond the first case. Simply click on a case's title bar to move the case to the front.
Tile Horizontally	Arranges cases in oblong horizontal rectangles on the screen. The maximize button in the individual case title bar can be clicked to bring a single case into full view.
Tile Vertically	Arranges cases in narrow vertical rectangles on the screen. The maximize button in the individual case title bar can be clicked to bring a single case into full view.

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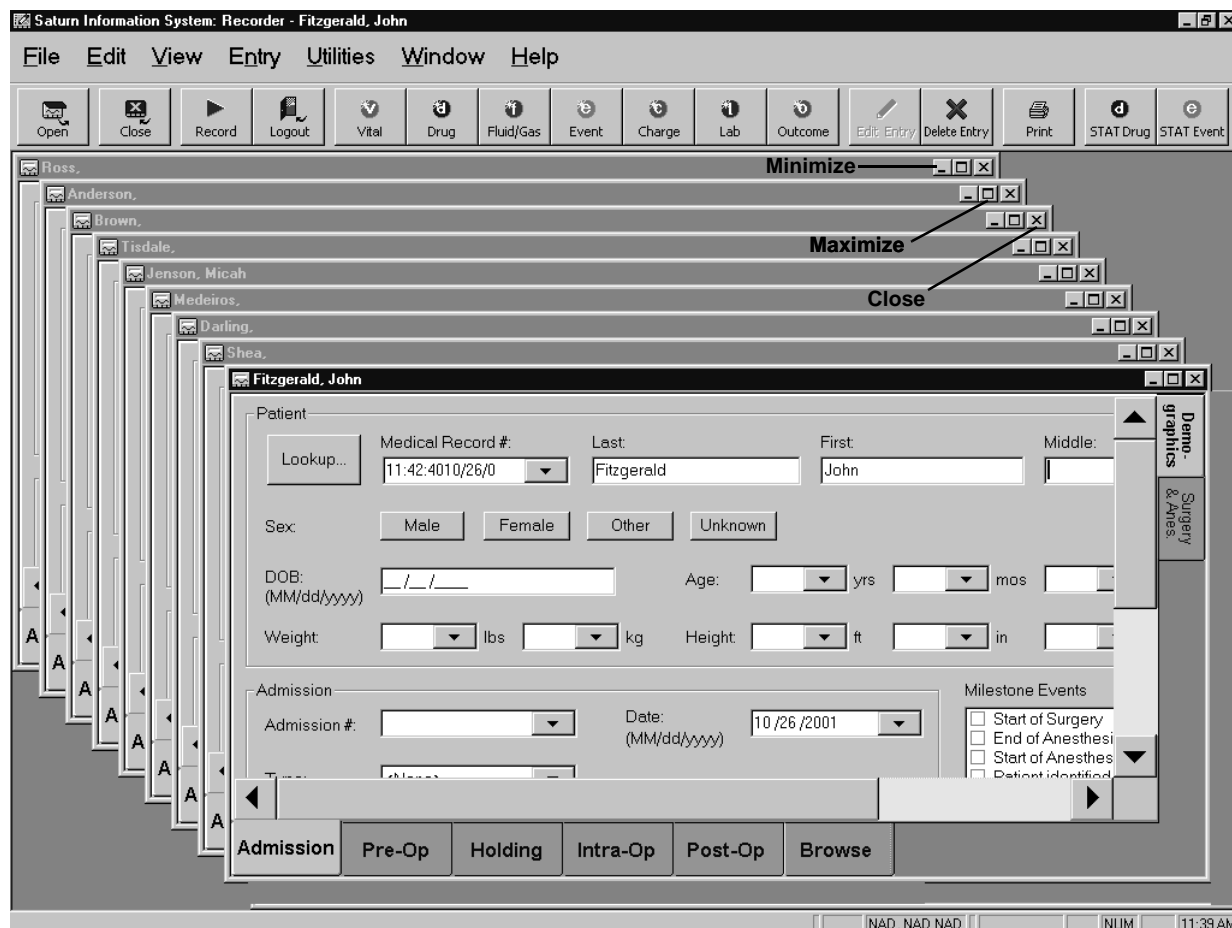
Figure 4-12. Cascade Display Using the Window Menu

3. Do the following to maximize, minimize, or close multiple cases displayed in the window:

- Click the minimize button in a case title bar to shrink the case to a button, which appears at the bottom of the screen. (If the button is hidden from view, press CTRL+TAB to display it.) To maximize a minimized case, click its maximize button.
- Click the maximize button in a case title bar to bring the case into full view. Press CTRL+TAB to re-display all the cases. Or, repeat step 2.

   Note: If you maximize a case and then select the minimize button in the Recorder Main window title bar, you are returned to the Windows desktop.

- Click the close button in a case title bar to close the case.

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Case Types and Icons

The name of each case in the list is preceded by an icon that describes the case type. The following icons represent the different types of cases that can appear in a case list.

Pre-Op

The Pre-Op icon means patient data has been entered, but the case is not yet complete.

Figure 4-13. Pre-Op Icon

In Progress

The In Progress icon means that the case is open and recording.

Figure 4-14. Case in Progress Icon

Post-Op

The Post-Op icon means that a case surgery is finished, the data has been recorded, and the case is closed.

Figure 4-15. Post-Op Icon

Archived

The Archived Case icon means the case is closed. However, archived cases can be reopened..

Figure 4-16. Archived Case Icon

Cancelled

The Cancelled Case icon means the case was begun and then cancelled.
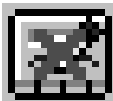
Figure 4-17. Cancelled Case Icon

Locked

The Locked Case icon appears next to icons of cases that are open on another workstation and can only be viewed (i.e., read-only). In Figure 4-18, the Locked Case icon appears next to the Post-Op icon.
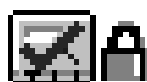
Figure 4-18. Locked Case Icon

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Before You Begin Recording

Your workstation may have been configured by the system administrator to "load an environment" for each case you record. If this is so, the data (automatic data, time scales, fluid balance, event bar, etc.) that will appear in the grid and graph areas of a Chart (Holding, Intra-Op and Post-Op) has been already selected.

However, if no environment is loaded, or if no data has been pre-configured to appear in the grid and graph sections of a Chart, you may configure it now by selecting the Case View Settings option on the View menu. Refer to "Changing General Display Parameters" on page 8-10 for more information.

Recording a Case

In order to record data collected automatically for a case in the holding area, the operating room or the postoperative location, you must start the record function.

Prerequisites
- Refer to "Before You Begin Recording" on page 4-16.
- You must be logged on to Recorder.
- You must be authorized to create or open a case.
- You must have created or opened a case before you begin recording.
- You must be at a Holding, Intra-Op or Post-Op workstation (see "Selecting a Workstation Type" on page 4-2).

Note: If you cannot open the case you want to record, you may not be authorized to do so, or the case may be open already at another workstation.

Procedure
Follow this procedure to start (and stop) recording automatically collected data for a case.

1. On the toolbar, press the Record button. This button starts (the first time it is pressed) and stops (the second time it is pressed) recording.

   –Or–
   On the File menu, choose Record.

   –Or–
   On the keyboard, press ALT, F, R.

   The following occurs:
   - The case begins recording.
   - A `RECORDING` message appears on the status bar at the bottom of the window.
   - A check mark appears next to the Record option on the File menu.
   - A "Start of Printed (Holding, Anesthesia or Post-Op) Record" event is placed on the Summary page, depending on the Workstation Type selected on the Utilities menu.

2. To stop recording data for the case, press the Record button.

   –Or–
   On the File menu, choose Record.

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–Or–

On the keyboard, press ALT, F, R. A message appears. Select Yes to stop recording.

The following occurs:

- The case stops recording.
- The **RECORDING** message disappears from the status bar at the bottom of the window.
- The check mark is removed next to the Record option on the File menu.
- An "End of (Holding, Anesthesia, or Post-Op) Record" event is placed on the Summary page, depending on the Workstation Type selected on the Utilities menu.

Changing the Start Record Time (Rollback)

If you forgot to press the Record button as soon as the patient was connected to the monitors, Recorder lets you "roll back" the start record time up to one hour to include the automatic data held in the buffer that belongs in the case.

Note: You can also change the start record time to a later time in the event you pressed the Record button too soon (i.e., before the patient was connected to the monitors). You may notice data on the Chart that does not belong in the case. Refer to "Editing Event Entries" on page 10-13 to change the start record time to a later time. Any data that precedes the new time you enter will be excluded from the case.

Prerequisite

The case must be recording. Be sure to roll back data before you stop recording or end the case, otherwise the data in the buffer will be lost.

Procedure

Follow these steps to load buffer data into Recorder:

1. On the Edit menu, choose Rollback. (If no data exists, "There is no data in the rollback buffer" message appears.) If data exists in the buffer, a screen resembling the one in Figure 4-19 appears:

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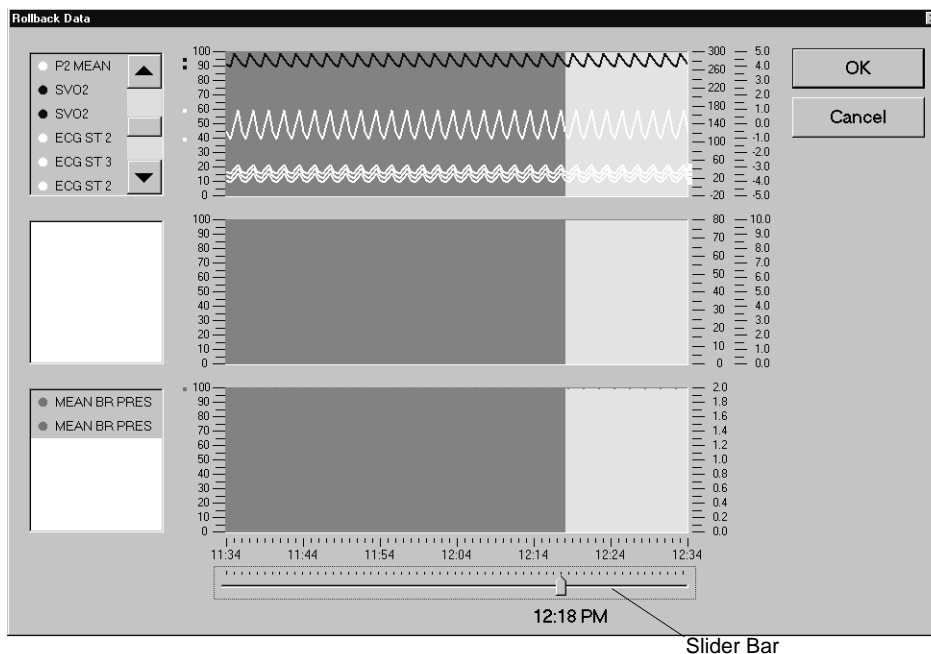
Figure 4-19. Rollback Data Screen (Example Only)

The slider bar shows a time range, beginning with the time the case was opened (up to one hour earlier) and ending with the last data recorded.

2. Select and drag the arrow on the slider bar to select the data you want added to the case. The data in the range that you select is highlighted. Data on the graphs outside the area you highlight will not transfer to Recorder.

3. Press the OK button. The data you selected is loaded into the Recorder application, and the start record event time is changed to the rollback start time.

Note: Repeat steps 2 and 3 if you missed any data you want to add to the case.

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Entering Data STAT

When you are in an emergency situation or time is limited, you can use the STAT Drug and STAT Event functions to mark the date and time a drug is administered or when an event occurs. A case does not need to be open when you add a STAT entry. The STAT entries appear in the next case that is opened, whether it is a new case or an existing case. When you have more time, you can create or open the case and update the STAT entries with more information.

Important: The STAT entries you make will be included in the next case opened at this workstation. Therefore, it is recommended that you open the patient's case if one already exists, or create the case by entering the patient's name or the data required to establish a new case (i.e., medical record number, etc.) as soon as possible. You can fill out the remaining boxes in the case later. Otherwise, you risk the chance that the STAT entries will be included in another patient's case.

Prerequisites   There are no prerequisites for this function; this function can be done at any time.

Procedure   Follow these steps to add a STAT entry.

1. On the toolbar, press either the STAT Drug or STAT Event button.

   –Or–
   On the Entry menu, select STAT Drug or STAT Event.

   –Or–
   On the keyboard, press F11 (for a drug) or F12 (for an event).

   Note: The date and time you press the STAT button are recorded as the date and time of drug administration or event occurrence.

2. For each additional drug administration or event occurrence that you want to enter quickly, press the appropriate STAT button.

3. When you have time, create or open the case and update the STAT entries. For update instructions, see "Editing Drug Entries" on page 9-11 and "Editing Event Entries" on page 10-13.

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5

Entering Admission Data

This section explains how to enter and delete data surrounding the patient's admission and upcoming surgery.

5 | Entering Admission Data

Entering Admission Data

The Admission section enables you to enter data about the patient's admission and surgery. It also enables you to view milestone events relating to the patient's status. Depending on the security rights configured by the system administrator, Pre-Op, Intra-Op and Post-Op users also may have read-only or total access to data in the Admission section. The tabs remain dimmed for sections that have not been configured.

Prerequisite   The case for which you want to enter patient information must be open.

Procedure   Follow this procedure to enter and view admission data.

Press the Admission tab at the bottom of the Recorder window.

–Or–
On the View menu, choose Admission.

–Or–
On the keyboard, press ALT, V, A, and then press ENTER.

The Demographics page of the Admission section appears (Figure 5-1 on page 5-3).

Demographics

The Demographics page (Figure 5-1 on page 5-3) allows you to enter all the necessary patient information needed for record keeping, as well as to view the patient's status of the completed or incomplete milestone events configured by your system administrator.

Note: If the patient is in the database, you can load the patient's demographic information into Recorder without retyping it. Refer to "Loading Existing Patient Data into a Case" on page 5-6.

Prerequisite   The case for which you want to enter patient information must be open, and the Admission tab must be selected.

Procedure   Follow this procedure to enter and view demographics data.

1. Press the Demographics page tab.

   –Or–
   On the View menu, choose Admission then Demographics.

   –Or–
   On the keyboard, press ALT, V, A, D.

   The Demographics page appears (Figure 5-1 on page 5-3).

Figure 5-1. Admission Section, Demographics Page

2. **Enter patient information, as described in** Table 5-1 **on page 5-4. You can return to the Admission section as often as you wish to add new information or edit previously entered information.**

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Table 5-1. Demographics Page Options (Admission)

Option	Description
Patient Area	
Medical Record #	A unique medical record number that identifies the patient.
Lookup Button	A button that you can press to display a list of patients for whom data has already been entered into the system. If the patient for whom you are entering data is on the list, you can have Recorder complete the Patient area (sex, date of birth, etc.) for you. Just select the patient's name and press the OK button.
	Caution: Remember that the Lookup function is simply a shortcut to reduce your data entry chores. Do not attempt to use the Lookup function to create or open a case. If you do, the patient you select will become associated with the case that is currently open. (You can recover from an incorrect association by selecting the correct patient name in the Lookup list or by typing the correct data in the Patient area.)
Last	The patient's last name.
First	The patient's first name.
Middle	The patient's middle name or initial.
AKA	The patient's nickname.
Sex	The patient's sex. M, male; F, female; O, other, U, unknown.
DOB	The date of birth (up to 120 years) in *M/d/yyyy, yyyy.M.d*, or any other format in which your system administrator sets up your system. Leading zeros are not required. You can enter a date using the keyboard.
	Examples: 9/22/1899 1899.09.22
	When you enter a valid date, Recorder automatically calculates and displays the patient's age (i.e., yrs, mos, days).
	Note: Four digits must be entered for the year.
Age	The patient's age in years, months, and days. Type it, or enter it by selecting the yrs, mos, and days arrows and then entering it on the keypad. Recorder automatically calculates and displays the age when you enter the date of birth (DOB). If you manually enter the age, the system clears the date of birth.
	Note: The calculated age is the patient's age on the date of surgery (the Date box in the Surgery area). For example, if the date of surgery is two months in the future, these two months will be reflected in the calculated age.

Table 5-1. Demographics Page Options (Admission) (continued)

Option	Description
Weight	The patient's current weight in pounds (up to 1,200) or kilograms (up to 544). Type it, or select the Weight arrow and then enter it on the keypad. When you enter the weight for one unit of measure, Recorder automatically calculates and displays the weight in the other unit as well.
Height	The patient's current height in feet (up to 9) and inches (up to 11) or in centimeters (up to 302.26). Type it, or select the Height arrow and then enter it on the keypad. When you enter the height for one unit of measure, Recorder automatically calculates and displays the height in the other unit, as well.
Admission Area	
Admission #	The admission identification number. Type it, or select the Admission # arrow and then enter it on the keypad..
Date	The date of admission in *M/d/yyyy, yyyy.M.d*, or any other format in which your system administrator sets up your system. Leading zeros are not required. You can enter the date on the calendar by selecting the Date arrow (see "Selection Calendars" on page 2-26) or you can enter it on the keyboard. The current date is the default for a new case. *Note:*Four digits must be entered for the year.
Type	The type of admission: Emergency, Inpatient, Outpatient, or Same Day. You can add additional types via List Manager. Select it using the Type arrow.
Insurance	The patient's medical insurance coverage. You can add or delete insurance carriers. • **To add one or more insurance carriers**, press the Edit button. Then select one or more check boxes on the single-level pick list and press the OK button. (For information about pick lists, see Section 2, "Learning the Basics.") • **To delete an insurance carrier**, highlight the name in the Insurance window and press the DELETE key. Or, press the Edit button and then clear the check box next to the insurance name you want to delete.
General Area	
Remarks	Notes regarding the patient. Up to 2,048 characters can be entered.
Milestone Events	A list of milestone events configured by the system administrator. These events are checked automatically by the Recorder program when each one is reached.

5 | Entering Admission Data

Loading Existing Patient Data into a Case

Perform these steps to find a patient in the database and load the patient's demographic data into the case.

1. Do one of the following:

   Press the Lookup button. The Select Patient dialog box (Figure 5-2) appears. Type the patient's last name (the letters appear in the speed search box as you type them). Names beginning with the letters you type will appear. Search the list to see if the patient is in the database. If not, go to step 3.

   –Or–

   In the Last box, enter the patient's last name, then press the TAB key. If the last name is in the database, the Select Patient dialog box appears. Search the list to see if the patient is in the database. If not, press Cancel and go to step 3.

2. Select the patient from the Select Patient dialog box and press the OK button to load the patient's demographic information into the boxes and establish the case.

3. If the patient is not in the database, enter the patient's last name and press the TAB key to move to the next box and establish the case. Enter all necessary information. Refer to Table 5-1 on page 5-4 for a description of each box on the Demographics page.

Figure 5-2. Select Patient Dialog Box

Entering Admission Data | **5**

Surgery & Anes.

The Surgery & Anes. page allows you to enter the patient's diagnosis, surgical procedure, anesthesia procedure and type, DRG, staff assigned to the case, and date of surgery.

Prerequisite   The case for which you want to enter patient information must be open, and the Admission section tab must be selected.

Procedure   Follow this procedure to enter surgery and anesthesia data.

1. Press the Surgery & Anes. page tab.

   –Or–
   On the View menu, choose Admission and then Surgery/Anesthesia.

   –Or–
   On the keyboard, press ALT V, A, S.

   The Surgery & Anes. page appears (Figure 5-3).

Figure 5-3. Admission Section, Surgery & Anes. Page

2. Enter surgery and anesthesia information, as described in Table 5-2 on page 5-8. You can return to the Admission section as often as you wish to add new information or edit previously entered information.

5 | Entering Admission Data

Table 5-2. Surgery & Anesthesia Page Options (Admission)

Option	Description
Surgery Area	
Diagnosis	The diagnosis associated with the procedure(s). You can add or delete diagnoses. See "Adding and Deleting Surgical Diagnoses" on page 5-10 for more information.
Procedure(s)	The procedure(s) being performed. You can add or delete procedures. See "Adding and Deleting Surgical Procedures" on page 5-12 for more information.
Date	The date of surgery in *M/d/yyyy, yyyy.M.d*, or any other format in which your system administrator sets up your system. Leading zeros are not required. You can select the date from a drop-down calendar or enter it from the keyboard. The current date is the default for a new case. *Note:*Four digits must be entered for the year.
Surgeon(s)	The surgeon(s) performing the procedure(s). You can add or delete surgeons. • **To designate one or more surgeons for the case**, press the Edit button. Then select one or more boxes on the single-level pick list and press the OK button. (For information about pick lists, see "Learning the Basics" on page 2-1.) • **To remove a surgeon from the case**, highlight that surgeon's name and then press the Delete button, or highlight that surgeon's name, select the Edit button, and deselect the surgeon's name. *Note:*The Sign button becomes active when you add or edit a surgeon. You may be required to select this button to enter an electronic signature (whether you add, edit or delete a staff) if one was configured by your Saturn Administrator.
Anesthesia Area	
Procedure(s)	The procedure(s) being performed. You can add or delete procedures. See "Adding and Deleting Surgical Procedures" on page 5-12 for more information.
Anesthesia Type(s)	The type of anesthesia being used in the patient case. You can add or delete anesthesia types. See "Adding and Deleting Anesthesia Type(s)" on page 5-20 for more information.

Entering Admission Data | **5**

Table 5-2. Surgery & Anesthesia Page Options (Admission)

Option	Description
Anesthesiol-ogist(s)	The anesthesiologist(s) performing the procedure(s). You can add or delete anesthesiologists. • **To designate one or more anesthesiologists for the case**, press the Edit button. Then select one or more boxes on the single-level pick list and press the OK button. (For information about pick lists, see "Learning the Basics" on page 2-1.) • **To remove an anesthesiologist from the case**, highlight that anesthesiologist's name and then press the Delete button, or highlight that anesthesiologist's name, select the Edit button, and deselect the anesthesiologist's name. *Note:* The Sign button becomes active when you add or edit an anesthesiologist. You may be required to select this button to enter an electronic signature (whether you add, edit or delete a staff) if one was configured by your Saturn Administrator.
Anesthetist(s)	The anesthetist(s) performing the procedure(s). You can add or delete anesthetists. • **To designate one or more anesthetists for the case**, press the Edit button. Then select one or more boxes on the single-level pick list and press the OK button. (For information about pick lists, see "Learning the Basics" on page 2-1.) • **To remove an anesthetist from the case**, highlight that anesthetist's name and then press the Delete button, or highlight that anesthetist's name, select the Edit button, and deselect the anesthetist's name. *Note:* The Sign button becomes active when you add or edit an anesthetist. You may be required to select this button to enter an electronic signature (whether you add, edit or delete a staff) if one was configured by your Saturn Administrator.
General Area	
DRG	The Diagnosis Related Group (classification of a hospital stay in terms of what was wrong with and what was done for a patient). You can add or delete DRGs. See "Adding and Deleting Diagnosis Related Groups (DRG)" on page 5-23 for more information.

5 Entering Admission Data

Adding and Deleting Surgical Diagnoses

Use the following procedure to add a surgical diagnosis to the case.

Note: To delete a diagnosis, go to step 6.

Prerequisite

The Surgery & Anes. tab in the Admission section must be selected.

Procedure

1. Press the Diagnosis Add button in the Surgery area (Figure 5-3 on page 5-7). The Enter Diagnosis dialog box (Figure 5-4) appears.
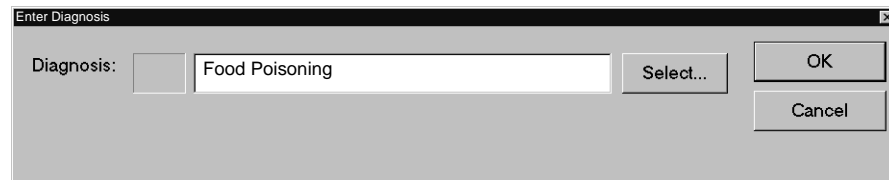
Figure 5-4. Customized Diagnosis Description

Note: To enter a customized text version of the diagnosis, type a diagnosis and press OK. *However, no diagnosis code will appear beside it in the display.* If you type your own diagnosis text, proceed to Step 6.

2. Press the Select button. The Select Diagnosis dialog box appears (Figure 5-5) and displays one or more diagnosis categories.
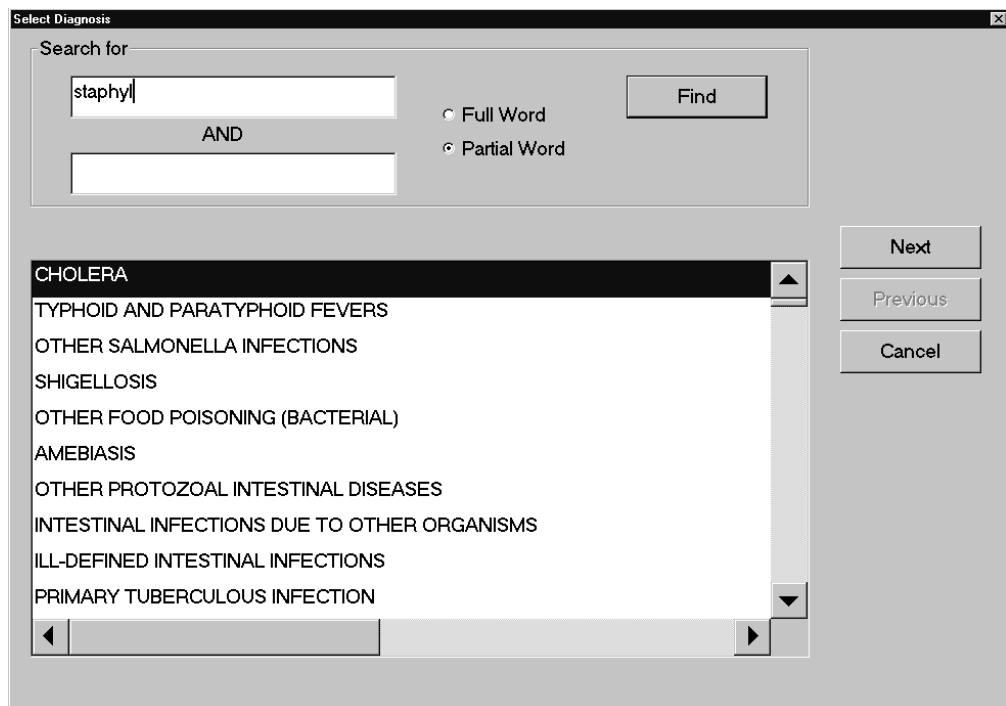
Figure 5-5. Select Diagnosis Dialog Box (Diagnosis Categories)

3. Do one of the following:

- If the Select Diagnosis dialog box displays a list of diagnoses *with codes*, go to step 4.

- Select a diagnosis *category* from the list (use the scroll bars to scroll through the list) and press Next. Another list may appear. (Repeat this step until a list of diagnoses with codes appears.)

- Or, select the Full Word or Partial Word option button. Then type the letters of the diagnosis you want to find in the Search for text box and press the Find button (Figure 5-5 on page 5-10).

4. Select a diagnosis from the list, then press the OK button. The diagnosis, its code and a description appear in the Enter Diagnosis dialog box (Figure 5-6).

Note: For information about lists, see "Learning the Basics" on page 2-1.
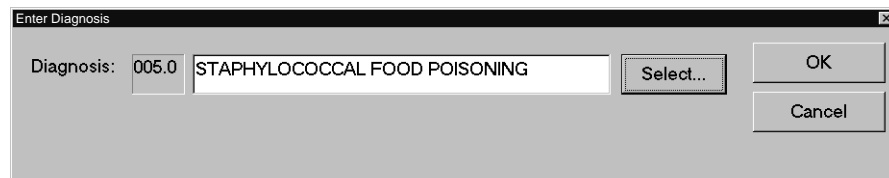
Figure 5-6. Standard Diagnosis Description

5. Press the OK button. The diagnosis text now appears in the Diagnosis window in the Surgery area (Figure 5-7).
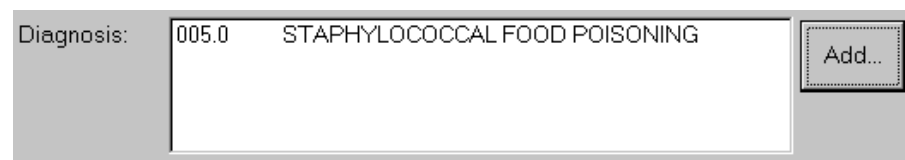
Figure 5-7. Diagnosis Description Window in the Surgery Area

6. Do one of the following:

- To add another diagnosis, repeat the preceding steps.

- To delete a diagnosis, select it in the Diagnosis window and then press the Delete Entry button on the toolbar or the DELETE key.

5 | Entering Admission Data

Adding and Deleting Surgical Procedures

Surgical procedures are given the most recent codes assigned by the American Medical Association at the time this manual is released. Do the following to add a surgical procedure to the case.

Note: To delete a procedure, go to step 6.

Prerequisite   The Surgery & Anes. tab in the Admission section must be selected.

Procedure
1. Press the Procedure Add button in the Surgery area (Figure 5-3 on page 5-7). The Enter Procedure dialog box appears (Figure 5-8).
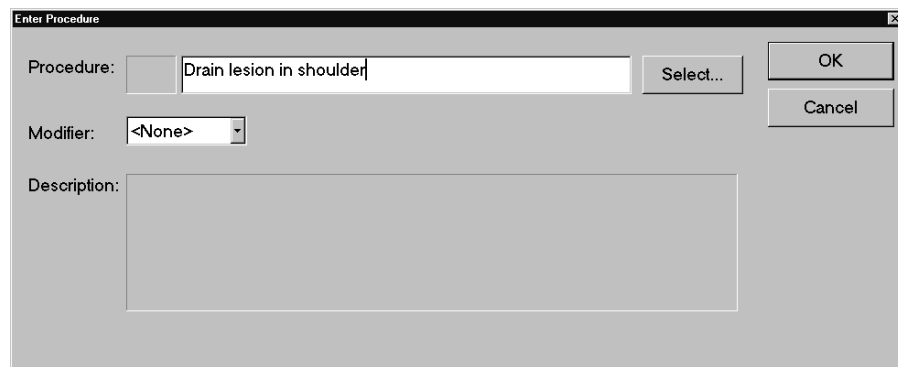
Figure 5-8. Customized Surgical Procedure Description

Note: To enter a customized text version of the procedure, type a procedure and press OK. *However, no procedure code will appear beside it in the display.* If you type your own procedure text, proceed to Step 6.

2. Press the Select button. The Select Procedure dialog box appears (Figure 5-9) and displays one or more procedure categories.
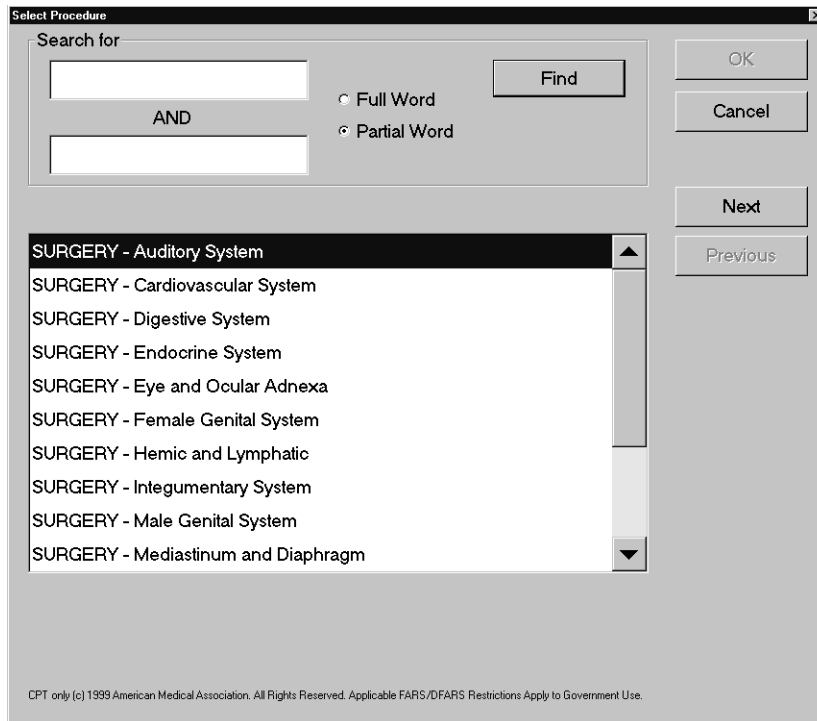
Figure 5-9. Select Procedure Dialog Box (Procedures with Codes)

3. **Do one of the following:**

   - If the Select Procedure dialog box displays a list of procedures *with codes*, go to step 4.

   - Select a procedure *category* from the list (use the scroll bars to scroll through the list) and press Next. Another list may appear. (Repeat this step until a list of procedures with codes appears.)

   - Or, select the Full Word or Partial Word option button. Then type the letters for the procedure you want to find in the Search for text box and press the Find button (Figure 5-9 on page 5-13).

4. **Select a procedure with a code and press OK. The procedure, its code and a description appear in the Enter Procedure dialog box (Figure 5-10).**

   Note: For information about lists, see "Learning the Basics" on page 2-1.

5 | Entering Admission Data

Figure 5-10. Standard Surgery Procedure Description

5. **Press the OK button. The procedure text now appears in the Procedure(s) window in the Surgery area (Figure 5-11).**
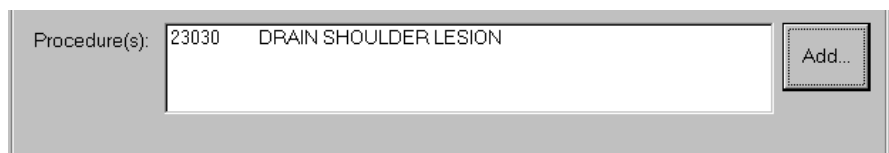
Figure 5-11. Procedure Description Window in the Surgery Area

6. **Do one of the following:**

   • **To add another procedure, repeat the preceding steps.**

   • **To delete a procedure, select it in the Procedure(s) window and then press the Delete Entry button on the toolbar or the DELETE key.**

Scheduling a Surgery Date

Use the following procedure to select a surgery date for a case.

Prerequisite

The Surgery & Anes. tab in the Admission section must be selected.

Procedure

1. Do one of the following:

   • Place the pointer in the Date box and type the month, day and year (four digits) of the scheduled surgery. Do *not* proceed to the next step.

   • Or, press the down arrow in the Date (M/d/yyyy) box. A calendar appears showing the month and year. Go to step 2.

Figure 5-12. Date Box Calendar for Scheduling Surgeries

2. Do one of the following:

   • To select a surgery date in the calendar month displayed on the screen, click a date in the current calendar. The date you select now appears in the Date box.

   • To select a surgery date in another month, click the arrow to the right of the calendar heading to select a future month and date, or click the arrow to the left of the calendar heading to select a previous month and date. The date you select appears in the Date box.

   Note: The surgery date must be the same as — or later than — the admission date.

5 | Entering Admission Data

Adding and Deleting Surgical Staff

Staff members can sign into the Admission section several times in a case. For example, if a staff person signs in to relieve another staff member, and then the original staff member returns to resume working on the case, the returning staff member can sign in again. Do the following to add or delete surgical staff.

Prerequisite

The Surgery & Anes. tab in the Admission section must be selected.

Procedure

1. Press the Surgeon(s) Edit button in the Surgery area (Figure 5-3 on page 5-7). The Select Surgeon(s) dialog box appears (Figure 5-13).
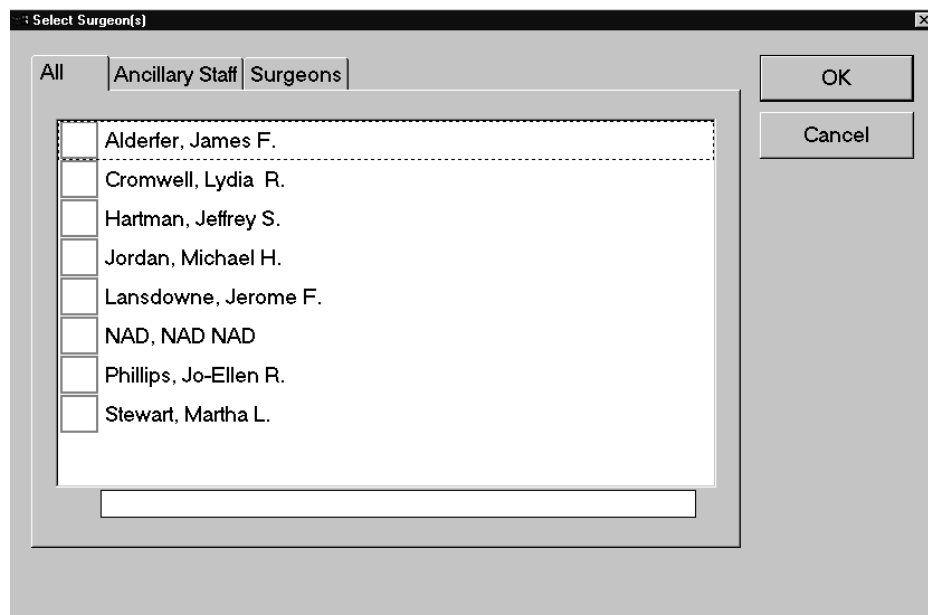
Figure 5-13. Select Surgeon(s) Dialog Box (None Selected)

2. Do one of the following:

   - To add a staff to a case, select its check box by clicking on it. When you select a staff from the All tab, the staff is automatically selected in the other tabs where the staff is a member (i.e., Ancillary Staff and Surgeons). Press the OK button. The staff appears in the Surgeon(s) window.

   - To delete a staff from a case, select a name in the Surgeon(s) window and then press the Delete Entry button on the toolbar. A message appears. Select Yes to delete. If an electronic signature dialog box appears, enter the password and then press OK. The staff name is removed from the window.

   Important: To enter an electronic signature, a staff must have an assigned User Logon name and Password. Also, a staff who uses an electronic signature cannot be deleted from a case without entering the staff's password in the electronic signature dialog box. Refer to "Electronic Signatures" on page 2-34 for more information.

Adding and Deleting Anesthesia Procedures

Do the following to add an anesthesia procedure to the case.

Note: To delete a procedure, go to step 6.

Prerequisite

The Surgery & Anes. tab in the Admission section must be selected.

Procedure

1. Press the Procedure Add button in the Anesthesia area (Figure 5-3 on page 5-7). The Enter Procedure dialog box appears (Figure 5-14).

Figure 5-14. Customized Anesthesia Procedure Description

Note: To enter a customized text version of the procedure, type a procedure and press OK. *However, no procedure code will appear beside it in the display.* If you type your own procedure text, proceed to Step 6.

2. Press the Select button. The Select Procedure dialog box appears (Figure 5-15) and displays one or more procedure categories.

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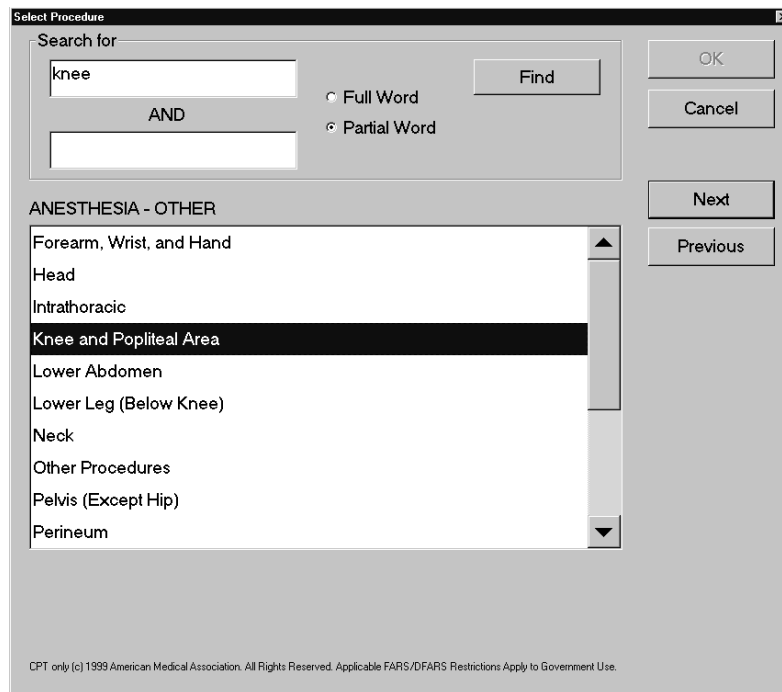
Figure 5-15. Select Procedure Dialog Box

3. Do one of the following:

- If the Select Procedure dialog box displays a list of procedures *with codes*, go to step 4.

- Select a procedure *category* from the list (use the scroll bars to scroll through the list) and press Next. Another list may appear. (Repeat this step until a list of procedures with codes appears.)

- Or, select the Full Word or Partial Word option button. Then type the letters for the procedure you want to find in the Search for text box and press the Find button (Figure 5-15).

4. Select a procedure from the list, then press the OK button. The procedure, its code and a description appear in the Enter Procedure dialog box (Figure 5-16).

   Note: For information about lists, see "Learning the Basics" on page 2-1.

Entering Admission Data | **5**
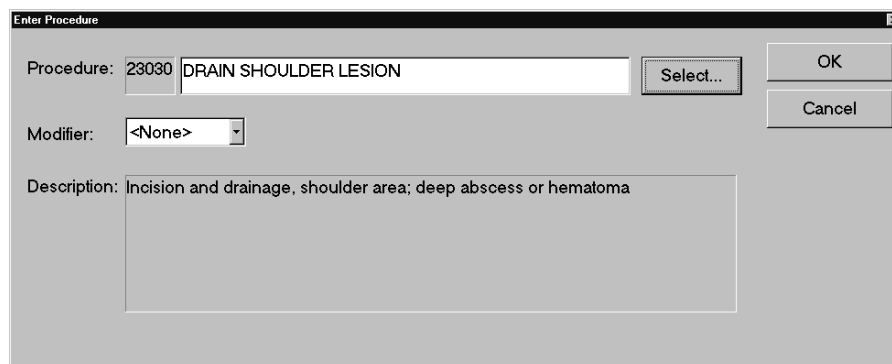
Figure 5-16. Standard Anesthesia Procedure Description

5. **Press the OK button. The procedure text now appears in the Procedure(s) window in the Anesthesia area (Figure 5-17).**

Figure 5-17. Procedure Description Window in the Anesthesia Area

6. **Do one of the following:**

   • **To add another procedure, repeat the preceding steps.**

   • **To delete a procedure, select it in the Procedure(s) window and then press the Delete Entry button on the toolbar or the DELETE key.**

5 | Entering Admission Data

Adding and Deleting Anesthesia Type(s)

Do the following to add or delete an anesthesia type in the case.

Note: To delete an anesthesia type, go to step 4.

Prerequisite

The Surgery & Anes. tab in the Admission section must be selected.

Procedure

1. Press the Anesthesia Type(s) Edit button in the Anesthesia area (Figure 5-3 on page 5-7). The Select Anesthesia Type(s) dialog box appears (Figure 5-18).
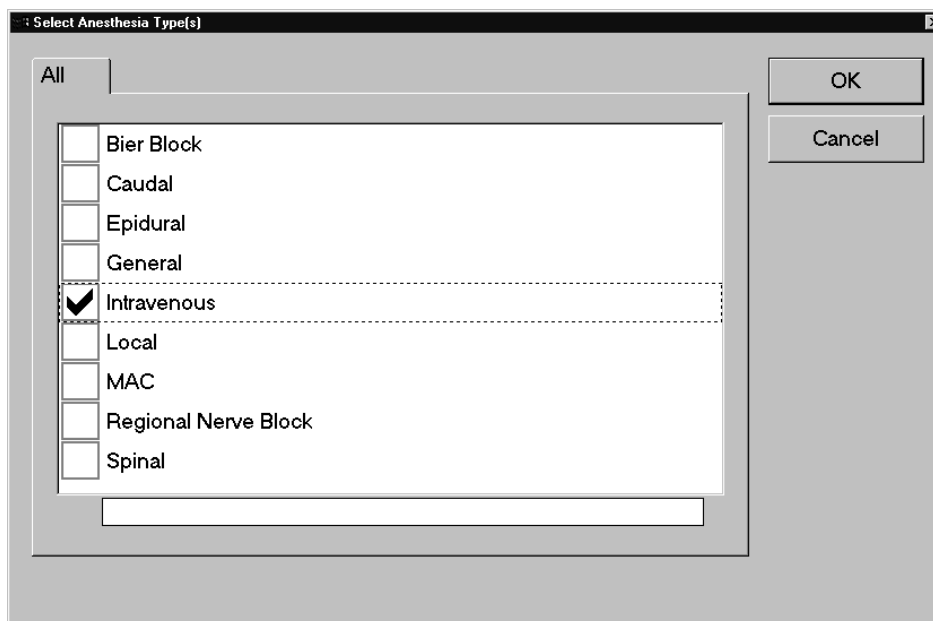
Figure 5-18. Select Anesthesia Type(s) Dialog Box

2. Do one of the following:
   - To add anesthesia types to a case, select one or more check boxes by clicking on them.
   - To delete anesthesia types from a case, deselect or clear one or more check boxes by clicking on them.

3. Press the OK button.

4. To delete an anesthesia type, select a name in the Anesthesia Type(s) window and then press the Delete Entry button on the toolbar.

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Entering Admission Data | **5**

Adding and Deleting Anesthesiology Staff

Staff members with a valid user name and password can sign into the Admission section several times in a case. (Staff members without logon rights can be added as well.) For example, if a staff person signs in to relieve another staff member, and then the original staff member returns to resume working on the case, the returning staff member can sign in again. Use the following procedure to add or delete an anesthesiology staff in a case.

Prerequisite

The Surgery & Anes. tab in the Admission section must be selected.

Procedure

1. Press the Anesthesiologist(s) or the Anesthetist(s) Edit button in the Anesthesia area (Figure 5-3 on page 5-7). The Select Anesthesiologist(s) dialog box (Figure 5-19) or the Select Anesthetist(s) dialog box appears (Figure 5-18).
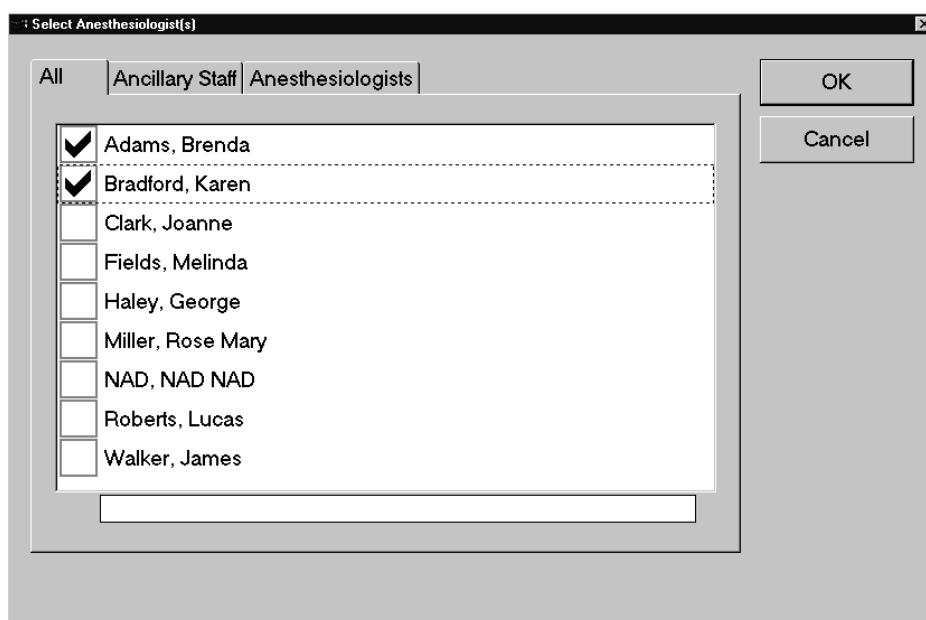
Figure 5-19. Select Anesthesiologist(s) Dialog Box

5 | Entering Admission Data
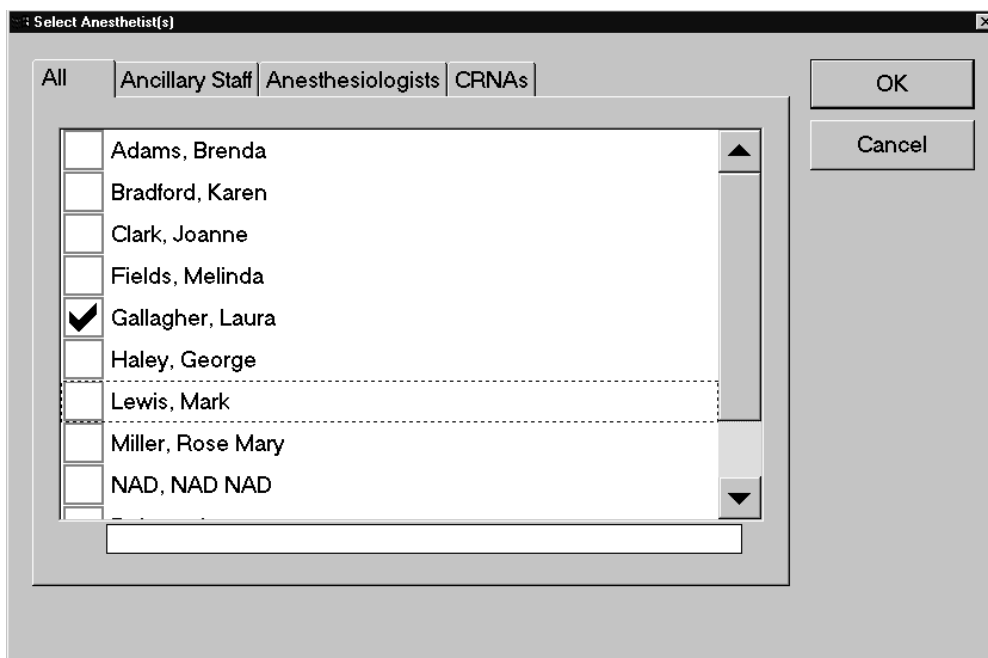
Figure 5-20. Select Anesthetist(s) Dialog Box

2. Do one of the following:

- To add a staff to a case, select its check box by clicking on it. When you select a staff from the All tab, the staff is automatically selected in the other tabs where the staff is a member (i.e., Ancillary Staff and Anesthesiologists). Press the OK button. The staff appears in the Anesthesiologist(s) window.

- To delete a staff from a case, select a name in the Anesthesiologist(s) window and then press the Delete Entry button on the toolbar. A message appears. Select Yes to delete. If an electronic signature dialog box appears, enter the password and then press OK. The staff name is removed from the window.

Important: To enter an electronic signature, a staff must have an assigned User Logon name and Password. Also, a staff who uses an electronic signature cannot be deleted from a case without entering the staff's password in the electronic signature dialog box. Refer to "Electronic Signatures" on page 2-34 for more information.

Recorder User's Guide

Adding and Deleting Diagnosis Related Groups (DRG)

Use the following procedure to add a DRG (Diagnosis Related Group) to the case.

Note: To delete a DRG, go to step 4.

Prerequisite

The Surgery & Anes. tab in the Admission section must be selected.

Procedure

1. Press the DRG Add button in the general area (Figure 5-3 on page 5-7). The Select DRG dialog box appears (Figure 5-21).
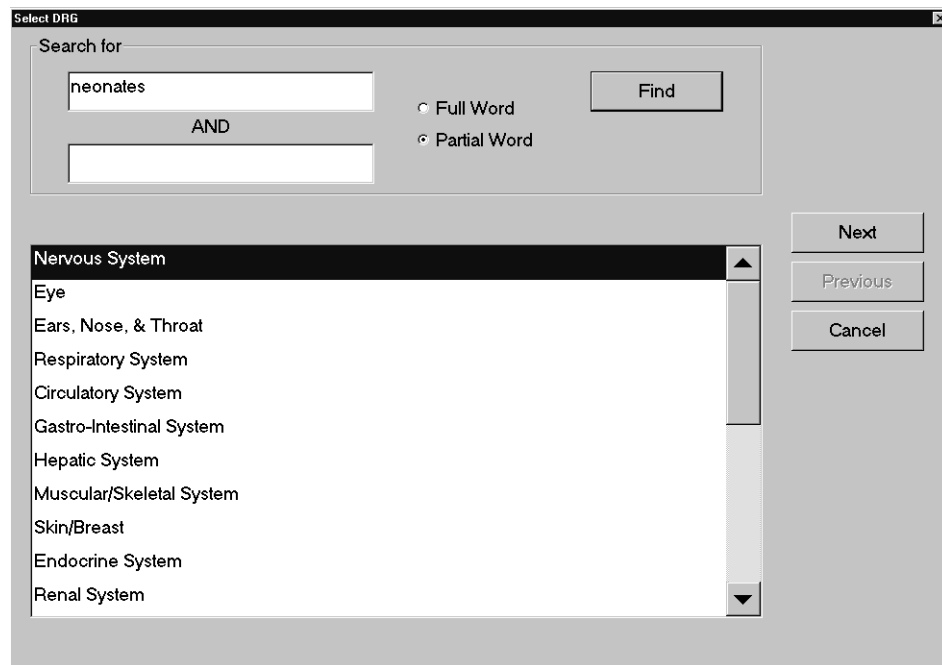
Figure 5-21. Select DRG Dialog Box (DRG Categories Shown)

2. Do one of the following:

   • Select a DRG *category* from the list (use the scroll bars to scroll through the list) and press Next. Another list may appear. (Repeat this step until a list of procedures with codes appears.)

   • Or, select the Full Word or Partial Word option button. Then type the letters for the DRG you want to find in the Search for text box and press the Find button (Figure 5-21).

3. Select a DRG from the list, then press the OK button. The DRG text now appears in the DRG window in the general area (Figure 5-22).

   Note: For information about lists, see "Learning the Basics" on page 2-1.

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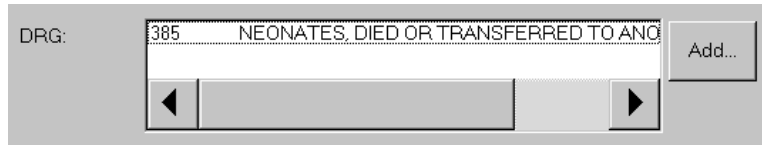
Figure 5-22. DRG Description Window in the General Area

4. Do one of the following:

- To add another DRG, repeat the preceding steps.

- To delete a DRG, select it in the DRG window, and then press the Delete Entry button on the toolbar or the DELETE key.

6

Entering Preoperative Data

This section explains how to enter, view and change preoperative data collected prior to surgery.

6 | Entering Preoperative Data

Entering Pre-Op Data

The Pre-Op section allows you to enter, view and change preoperative data relevant to a patient's case. Depending on the security rights configured by the system administrator, Pre-Op users also may have read-only or total access to data in the Admission section (see "Entering Admission Data" on page 5-2). The tabs remain dimmed for sections that have not been configured.

If a "paper" icon appears next to an item in any window, it means there are additional comments attached to that item for your review. Simply press the Attachment button (Figure 6-1) to review the remarks. In addition, scroll bars appear in windows to accommodate viewing lists that are longer than the size of the window.

Prerequisites
- The case for which you want to enter patient information must be open.
- Pre-Op must be selected in the Workstation Type list on the Utilities menu.

Procedure   Follow this procedure to enter data in the Pre-Op section.

Press the Pre-Op tab at the bottom of the Recorder window, then press the History page tab.

–Or–
On the View menu, choose Pre-Op, then History.

–Or–
On the keyboard, press ALT, V, P, and then press ENTER.

The Pre-Op section opens to the History page (Figure 6-1 on page 6-3). The remaining Pre-Op pages (Systems, Exam, Plan, HPI, and Summary) can be accessed by selecting the page tabs on the right side of the screen.

Entering Preoperative Data | **6**
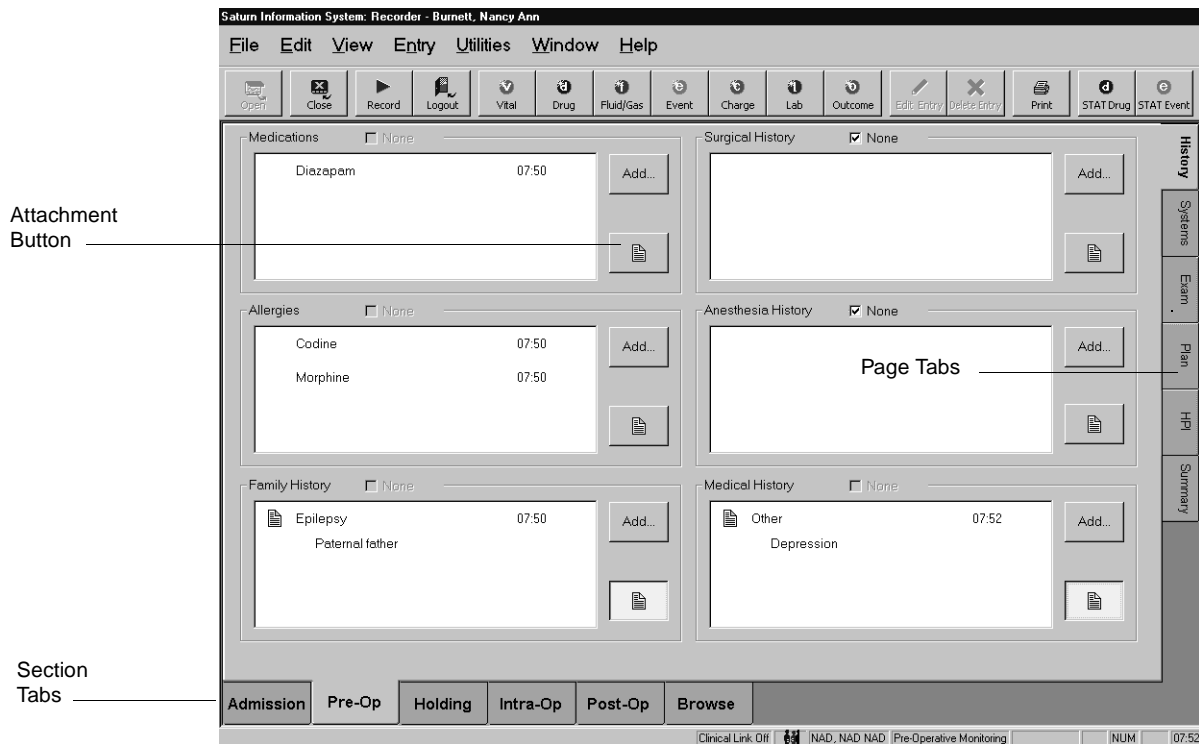
Figure 6-1. Pre-Op Section, History Page

History

The History page allows you to enter and view the patient's history of medications, allergies, family diseases, surgeries, any anesthesia previously administered to the patient, and the patient's medical history. See Table 6-1 on page 6-6 for a description of options on the History page.

Each area has an Add button and an Attachment button, which looks like a paper icon. When you type remarks in a special text box when adding an item to a window, the item appears with the paper icon next to it. You can click the None check box to indicate that there is no data relevant for a particular category of data.

Prerequisite   The patient case must be open and the Pre-Op section tab must be selected.

Procedure   Follow this procedure to enter and view patient historical data.

1. Select the History tab. The History page appears (Figure 6-1 on page 6-3).

2. Press the Add button in any of the areas where you want to add patient historical data to the patient's case. The corresponding "Add" dialog box appears. The Add Medications dialog box is shown in Figure 6-2.

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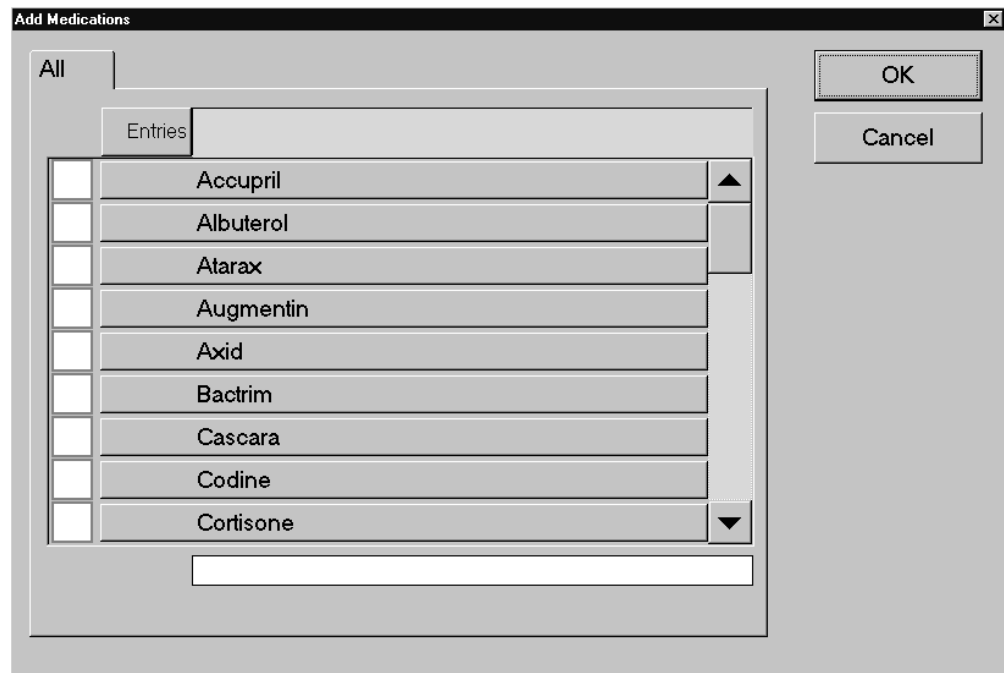
Figure 6-2. Add Medications Dialog Box

3. Select items from the list of options by doing one or more of the following:

- Select the Entries header to sort the list of items to show those that were previously selected in a case. Then scroll through the list and click a check box to select an item.

- Select the Name header to sort the list items alphabetically. Then scroll through the list and click a check box to select an item.

- In the speed search text box, type the letters of the item you want to find. Entries beginning with the letters you typed will appear (Figure 6-2 on page 6-4). Select the check boxes next to the items you want to add to the patient's historical data.

4. After you select the check boxes, you can change the time, date and other data, and add remarks by doing one of the following:

- If using a touch screen or a mouse, tap or click on the name of the item you checked (not on the check box, though). The Add Entry dialog box for the item appears (Figure 6-3).

- If using the keyboard, press the ENTER key when you finish selecting check boxes. Then highlight the item in the History page window and press the ENTER key. The Add Entry dialog box for the item appears (Figure 6-3).

Entering Preoperative Data | **6**
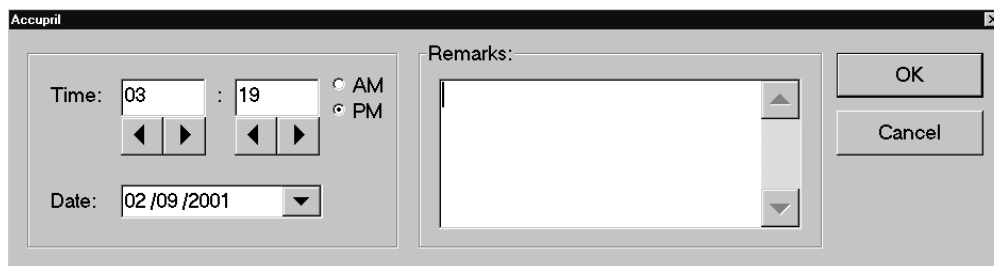
Figure 6-3. Add Entry Dialog Box

5. Type the date, or press the down arrow in the Date box and select the date from the calendar.

6. Type any remarks about the item in the Remarks text box.

7. Select the time by inserting the pointer in each time box (the one on the left is for hours, the one on the right is for minutes) and typing it in. Or, press the down arrow beneath each Time box until the correct time appears. Then select the AM or PM option button.

8. Press the OK button. An Attachment icon appears next to the item in the list if you typed remarks. Refer to "Attachment Buttons" on page 2-33 for viewing, editing and deleting comments.

9. To delete an item in any History page window, select it and press the Delete Entry button on the toolbar; or press the DELETE key. Select Yes when prompted to delete it.

6 | Entering Preoperative Data

The following table describes the History Page options.

Note: There are no options with defaults in the History page.

Table 6-1. History Page Options (Pre-Op)

Option	Description
Medications	Indicates medications the patient is taking currently. • Allows you to create a list or delete or add medications to the current list. • Allows you to view, add or change remarks typed in the Remarks text box of an Entry dialog box when the item is selected. • None indicates not applicable.
Allergies	Indicates any allergies the patient may have. • Allows you to create a list or delete or add allergies to the current list. • Allows you to view, add or change remarks typed in the Remarks text box of an Entry dialog box when the item is selected. • None indicates not applicable.
Family History	Indicates serious medical conditions (past or present) of family members. • Allows you to create a list or delete or add family history items to the current list. • Allows you to view, add or change remarks typed in the Remarks text box of an Entry dialog box when the item is selected. • None indicates not applicable.
Surgical History	Indicates the patient's prior history of surgery. • Allows you to create a list or delete or add past surgeries to the current list. • Allows you to view, add or change remarks typed in the Remarks text box of an Entry dialog box when the item is selected. • None indicates not applicable.
Anesthesia History	Indicates any prior occasions of anesthesia given to the patient. • Allows you to create a list or delete or add past surgeries to the current list. • Allows you to view, add or change remarks typed in the Remarks text box of an Entry dialog box when the item is selected. • None indicates not applicable.

Entering Preoperative Data | **6**

Table 6-1. History Page Options (Pre-Op) (continued)

Option	Description
Medical History	Indicates the patient's own medical history, other than surgeries. • Allows you to create a list or delete or add other medical conditions, diseases, or diagnoses to the current list. • Allows you to view, add or change remarks typed in the Remarks text box of an Entry or other dialog box when the item is selected. • None indicates not applicable.

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Systems

The Systems page allows you to add or delete patient data related to the patient's respiratory, hepato/gastrointestinal, cardiovascular, neuro/musculoskeletal, renal/endocrine, and other patient systems. Each area has an Add button and an Attachment button (looks like a paper icon). When you type remarks in a special text box when adding an item to a window, the item appears with the paper icon next to it. You can click the WNL or N/A check box to indicate "Within Normal Limits" or "Not Applicable." See Table 6-2 on page 6-11 for a description of options on the Systems page.

Prerequisite   The Pre-Op section tab must be selected.

Procedure   Follow these steps to enter and view patient systems data.

     1. Select the Systems tab. The Systems page appears (Figure 6-4).
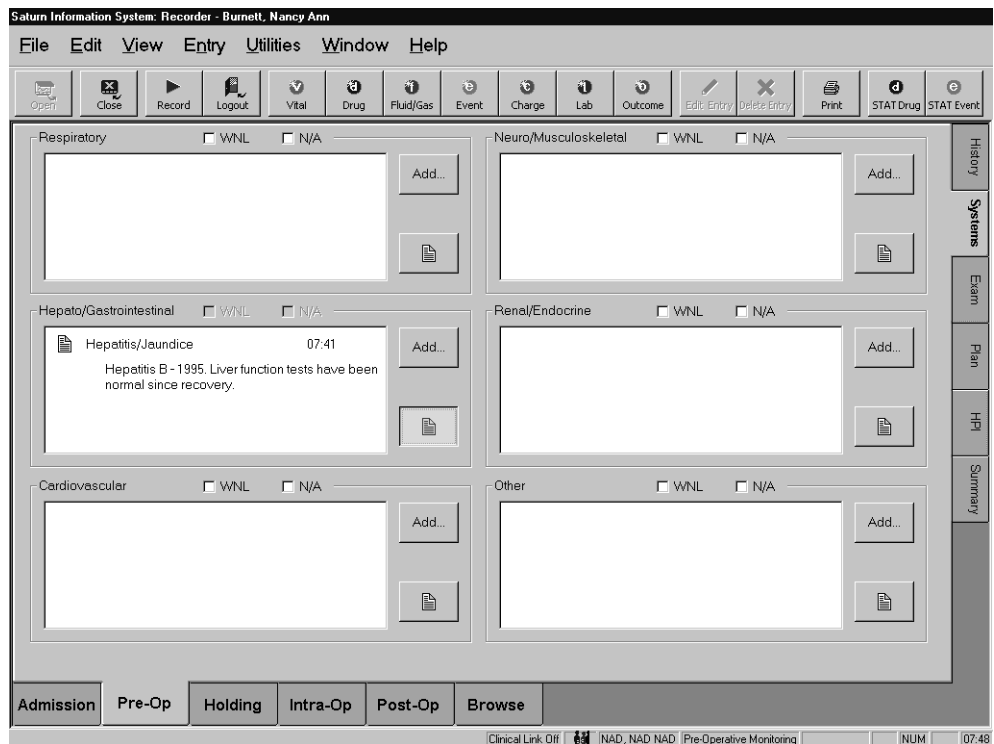
Figure 6-4. Pre-Op Section, Systems Page

     2. Press the Add button in any of the areas where you want to add systems data to the patient's case. The corresponding Add dialog box appears. The Add Respiratory dialog box is shown in Figure 6-5.

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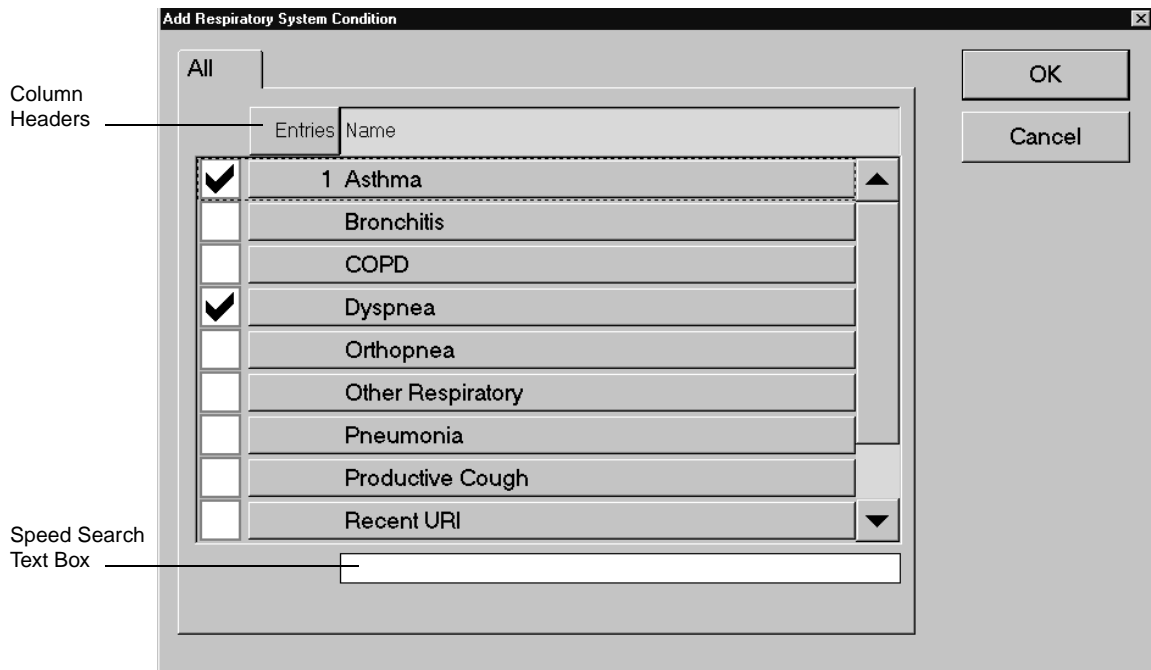
Figure 6-5. Add Respiratory Dialog Box

3. Select items from the list of options by doing one or more of the following:

- Select the Entries header to sort the list of items according to whether they have been selected previously. Then scroll through the list and click one or more check boxes to select items.

- Select the Name header to sort the list items alphabetically. Then scroll through the list and click check boxes to select items.

- Type the letters of the item you want to find; the letters appear in the speed search text box (Figure 6-5). Entries beginning with the letters you typed will appear. Select the check boxes next to the items you want to add to the patient's historical record.

4. Double-click or press an item to change its properties, or to add or change remarks. The corresponding item's Edit Entry dialog box appears.
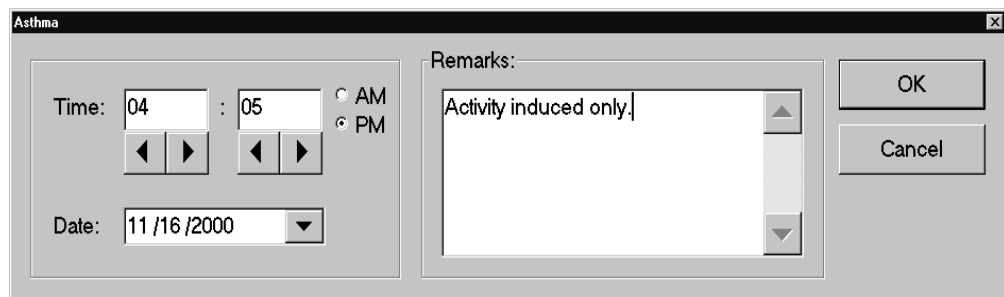
Figure 6-6. Edit Entry Dialog Box (Systems Page)

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5. Do one or more of the following:

   - Click the arrow keys in the Time boxes to change the time, as well as the applicable AM or PM option button.

   - Place the pointer in the Date box and type in another date. Or, press the down arrow in the Date box. A calendar appears. Select a date on the calendar.

     Note: To select a date in a future month, click the arrow to the right of the calendar heading. To select a date in a previous month, click the arrow to the left of the calendar heading. The date you select now appears in the Date box.

   - Insert the pointer in the Remarks text box and type new text or delete existing text.

6. Press the OK button to keep the new information you have just entered, or press Cancel to start over.

7. To delete an entry, clear the check box by selecting it again. Or, highlight an item in a Systems page window and select the Delete Entry button on the toolbar.

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The following table describes the Systems page options.

Table 6-2. Systems Page Options (Pre-Op)

Option	Description
Respiratory	Indicates the preoperative respiratory condition of the patient (Asthma, Bronchitis, COPD, etc.). • Allows you to create a list, or add or delete conditions from the current list. • Allows you to view, add or change remarks typed in the Remarks text box of an Entry dialog box when the item was selected. • The WNL (within normal limits) box is checked if there are no items selected. N/A indicates not applicable.
Hepato/ Gastrointestinal	Indicates the preoperative hepato/gastrointestinal condition of the patient (Bowel Obstruction, Cirrhosis, Ulcers, etc.). • Allows you to create a list, or add or delete conditions from the current list. • Allows you to view, add or change remarks typed in the Remarks text box of an Entry dialog box when the item was selected. • The WNL (within normal limits) box is checked if there are no items selected. N/A indicates not applicable.
Cardiovascular	Indicates the preoperative cardiovascular condition of the patient (Angina, ASHD, CHF, etc.). • Allows you to create a list, or add or delete conditions from the current list. • Allows you to view, add or change remarks typed in the Remarks text box of an Entry dialog box when the item was selected. • The WNL (within normal limits) box is checked if there are no items selected. N/A indicates not applicable.
Neuro/ Musculoskeletal	Indicates the preoperative neuro/musculoskeletal condition of the patient (Arthritis, Back Problems, DJD, etc.). • Allows you to create a list, or add or delete conditions from the current list. • Allows you to view, add or change remarks typed in the Remarks text box of an Entry dialog box when the item was selected. • The WNL (within normal limits) box is checked if there are no items selected. N/A indicates not applicable.

Table 6-2. Systems Page Options (Pre-Op) (continued)

Option	Description
Renal/Endocrine	Indicates the preoperative renal/endocrine condition of the patient (Diabetes, Thyroid Disease, Urinary Retention, etc.). • Allows you to create a list, or add or delete conditions from the current list. • Allows you to view, add or change remarks typed in the Remarks text box of an Entry dialog box when the item was selected. • The WNL (within normal limits) box is checked if there are no items selected. N/A indicates not applicable.
Other	Indicates the preoperative respiratory condition of the patient. • Allows you to create a list, or add or delete conditions from the current list. • Allows you to view, add or change remarks typed in the Remarks text box of an Entry dialog box when the item was selected. • The WNL (within normal limits) box is checked if there are no items selected. N/A indicates not applicable.

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Exam

The Exam page (Figure 6-7) allows you to enter and view information, such as the patient's hearing, visual and speech impairments, that were gathered during the patient's medical exam prior to treatment or surgery. You can select check boxes and option buttons that apply to the patient as well as enter comments in the text boxes for language, speech, alcohol, drug and tobacco use. Lab and vitals are displayed in the grid area of the screen. A triangle icon in the upper right corner of a grid cell means that remarks are attached to it. See Table 6-3 on page 6-15 for a description of options on the Exam page.

Other case data regarding vitals, drugs, fluids/gases, events, charges, labs and outcomes can be viewed by selecting the Summary tab (Figure 6-14 on page 6-23).

Prerequisite   The Pre-Op section tab must be selected.

Procedure   Follow these steps to enter and view patient exam data.

1. Select the Exam tab. The Exam page appears (Figure 6-7).

Figure 6-7. Pre-Op Section, Exam Page

2. Select the check boxes in the Hearing Impairment, ADL Assist, Visual Impairment and Dental areas that apply to the patient.

3. Select the option buttons in the Other and Airway Classification areas that apply to the patient.

4. Select the option buttons that apply to the patient and then type any additional information in the text box beneath each of the following areas:

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- • Speaks Local Language
- • Speech Impairment
- • Alcohol Use
- • Street Drug Use
- • Tobacco Use (Figure 6-8)

Figure 6-8. Tobacco Use Area, Tobacco Use Keypad

Note: If you select the Y option button for Tobacco Use, the Pks/Day (Packs per Day) box is enabled. Click the down arrow and select the packs per day figure and then press the ENTER key on the numeric keypad. Or, type the number on the keyboard. Repeat this step for the Yrs. (Years of use) box.

5. Add any labs or vitals information using the Lab and Vital buttons. Or, add them by selecting Vitals and Labs from the Entry menu.

   The data you add appears in the Labs & Vitals grid on the Exam page. Refer to "Adding Lab Entries" on page 13-2 and "Adding Manual Vital Entries" on page 14-2 for more information.

The following table describes the Exam page options

Note: The options in the Exam page that have default information are: Speaks Local Language, Speech Impairment, Alcohol Use, Street Drug Use and Tobacco Use. Each has a default of No.

Table 6-3. Exam Page Options (Pre-Op)

Option	Description
Hearing Impairment	Indicates a patient's hearing impairment. • Select Hard of Hearing, Deaf (Left or Right ear), or Hearing Aid (Left or Right ear). • None indicates not applicable.
Visual Impairment	Indicates a patient's visual impairment. Select Glasses, Contacts (Left or Right eye), Cataracts (Left or Right eye), or Blind (Left or Right eye). • None indicates not applicable.
Other	
Autodonated Blood	Used to document that the patient has donated their own blood prior to surgery.
Refuse Transfusion	Patient has signed a statement refusing a blood transfusion if one is needed.
Organ Donor	In the event of death, patient is an organ donor.
Pregnant	Patient is pregnant.
ADL Assist	Client needs assistance. • Select Feeding, Bathing or Walking. • None indicates not applicable.
Dental	Client has dentures or caps. • Select Upper Dentures, Lower Dentures, Partial Dentures, or Caps. • Other indicates other dental conditions not listed, such as loose or chipped teeth. Notes can be documented on the Plan page.
Airway Classification	Indicates the Mallampati classification of the airway.
Labs & Vitals	Labs and vitals that have been entered manually in the Recorder program using the Lab and Vital buttons on the toolbar are displayed in this grid area. A triangle icon in the upper right corner of a grid cell means that remarks are attached to it.
Speaks Local Language	Indicates whether the patient speaks the local language.

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Table 6-3. Exam Page Options (Pre-Op) (continued)

Option	Description
Speech Impairment	Indicates whether the patient has a speech impairment or not. • Notes can be typed in the text box to indicate the type of impairment.
Alcohol Use	Indicates whether the patient drinks alcohol or not. • Notes can be typed in the text box to indicate the degree of use.
Street Drug Use	Indicates whether the patient uses or has used street drugs or not. • Notes can be typed in the text box to indicate the degree of use.
Tobacco Use	Indicates whether the patient uses tobacco or not. • Notes can be typed in the text box to indicate the degree of use.

Plan

The Plan page (Figure 6-9) allows you to view the medical plan formulated and reviewed by the attending physicians and other administrative and clinical personnel involved in the case. The items listed in the Process Verification window are preconfigured using the Saturn List Manager. See Table 6-4 on page 6-21 for a description of options on the Plan page.

Prerequisite   The Pre-Op section tab must be selected.

Procedure   Follow these steps to enter and view patient anesthesia plan data.

1. Select the Plan tab. The Plan page appears (Figure 6-9).

Figure 6-9. Pre-Op Section, Plan Page

2. Do one of the following:

   • Insert the pointer in the Pre-Op Date box and type the month, day and year (eight digits).

   • Or, select the down arrow key in the Pre-Op Date box. A calendar appears (Figure 6-10 on page 6-18). If the month and year are correct, click the day on the calendar. The date you select now appears in the Date box.

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Figure 6-10. Plan Page, Date Calendar

> *Note:* To select a date in a future month, click the arrow to the right of the calendar heading. To select a date in a previous month, click the arrow to the left of the calendar heading. Then click the day on the calendar. The date you select now appears in the Date box.

3. Select the arrow in the ASA Physical Status and the Anticipated Postoperative Care lists, and then select an item in each list.

4. Select any items in the Process Verification window that have been completed.

5. Type any comments in the Remarks window, as needed.

6. In the Discussed Anesthesia Plan area, select the Edit button. The Select Anesthesia Type(s) dialog box appears (Figure 6-11 on page 6-19).

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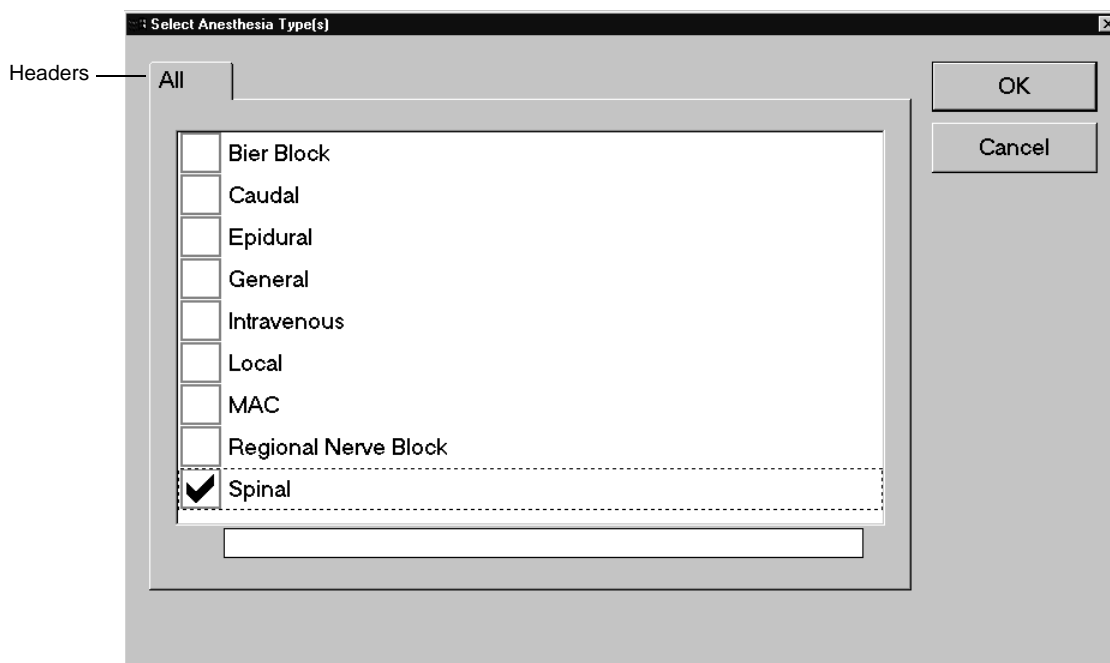
Figure 6-11. Plan Page, Select Anesthesia Type(s) Dialog Box

Select one or more check boxes; a check appears in the check box. To deselect a check box, clear it by selecting it again. When you are finished, select the OK button. The selections you made appear in the Discussed Anesthesia Plan window.

Note: To remove an item from the window, select it and press the Delete Entry button on the toolbar or the DELETE key.

7. In the Information Obtained By, the Anesthesiology Review, and the Surgeon Review areas, select the Edit button to select staff members for each area. The corresponding Select Staff dialog box appears, displaying a list of staff names from which to choose. The Surgeon Review dialog box is shown in Figure 6-12 on page 6-20.

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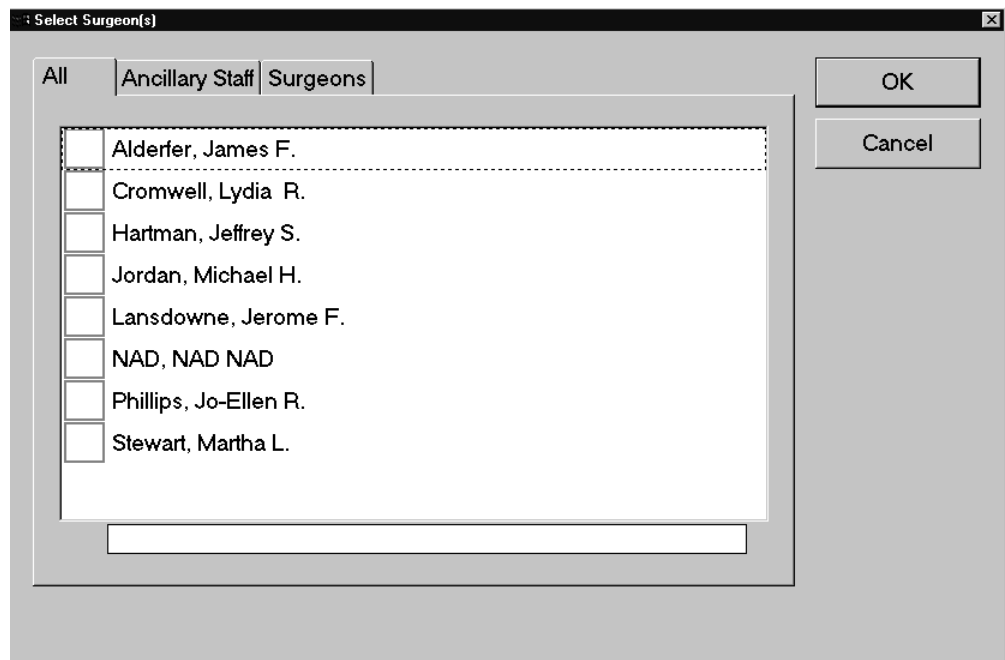
Figure 6-12. Plan Page, Select Surgeon Review Staff Dialog Box

8. Select one or more check boxes; a check appears in the check box. To deselect a check box, clear it by selecting it again. When you are finished, select the OK button. (If an electronic signature dialog box appears, go to the next step.) The selections you made appear in the corresponding window on the Plan page.

9. If you need to enter an electronic signature, select the staff name in the Plan page window, and then press the Sign button. Refer to "Electronic Signatures" on page 2-34 for more information.

> *Important:* To enter an electronic signature, a staff person must have an assigned User Logon name and Password. A staff who uses an electronic signature cannot be deleted from the case without entering the staff's password in the electronic signature dialog box.

10. To remove an item from the window, select it and press the DELETE key or the Delete Entry button on the toolbar.

Table 6-4 on page 6-21 describes the Plan page options.

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Note: The only options in the Plan page that have default information are ASA Physical Status and Anticipated Postoperative Care.

Table 6-4. Plan Page Options (Pre-Op)

Option	Description
Pre-Op Date M/D/YYYY	The date the preoperative plan was initiated. The date can be typed on the keyboard or selected by pressing the down arrow in the Date box and using the Pre-Op date calendar.
ASA Physical Status	The patient's physical status prior to surgery. The physical status code can be selected by pressing the down arrow in the ASA Physical Status box. *Default:* None.
Anticipated Postoperative Care	The expected follow-up care after surgery. Postoperative care can be selected by pressing the down arrow in the Anticipated Postoperative Care box. *Default:* None.
Process Verification	Items which your System Administrator has configured that must be completed prior to surgery.
Remarks	Important notes which may be relevant to staff prior to surgery.
Discussed Anesthesia Plan	The type of anesthesia to be administered. Use the Edit button to select choice(s) on the Select Anesthesia Type(s) screen.
Information Obtained By	List of staff who have gathered the preoperative data on the case. • Press the Edit button to make staff choices in the Select Pre-Op Information Staff dialog box. • The Sign button will be enabled if staff are added. Refer to "Electronic Signatures" on page 2-34.
Anesthesiology Review	List of anesthesiology staff who must review the case. • Press the Edit button to make staff choices on the Select Anesthesiology Review dialog box. • The Sign button will be enabled if staff are added. Refer to "Electronic Signatures" on page 2-34.
Surgeon Review	List of surgeons on the case. • Press the Edit button to make staff choices on the Select Surgeon Review Staff dialog box. • The Sign button will be enabled if staff are added. Refer to "Electronic Signatures" on page 2-34.

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HPI (History of Present Illness)

The HPI (History of Present Illness) tab lets you enter up to 4,000 characters of free-form text related to the history of the patient's present illness. Data is entered by typing on the keyboard.

Prerequisite   The Pre-Op section tab must be selected.

Procedure   Follow these steps to view, add or change history of present illness (HPI) data.

1. Press the HPI tab. The HPI page appears (Figure 6-13).

Figure 6-13. Pre-Op Section, HPI Page

2. Type the history of present illness information.

- To delete text, use the BACKSPACE key. Or, select text and then press the DELETE key.

- To begin a new paragraph (carriage return), press CTRL+ENTER.

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Summary

The Summary page (Figure 6-14) allows you to view a summary of manually entered data gathered during the preoperative period. The Filters area of the screen lets you limit the list of data in the window by clearing the check boxes of the data sets you do not want included. As many check boxes can be selected as needed. See Table 6-5 on page 6-26 for a description of options on the Summary page.

Prerequisite   The Pre-Op section tab must be selected.

Procedure   Follow this procedure to view and edit patient summary data.

1. Press the Summary tab. The Summary page appears Figure 6-11).
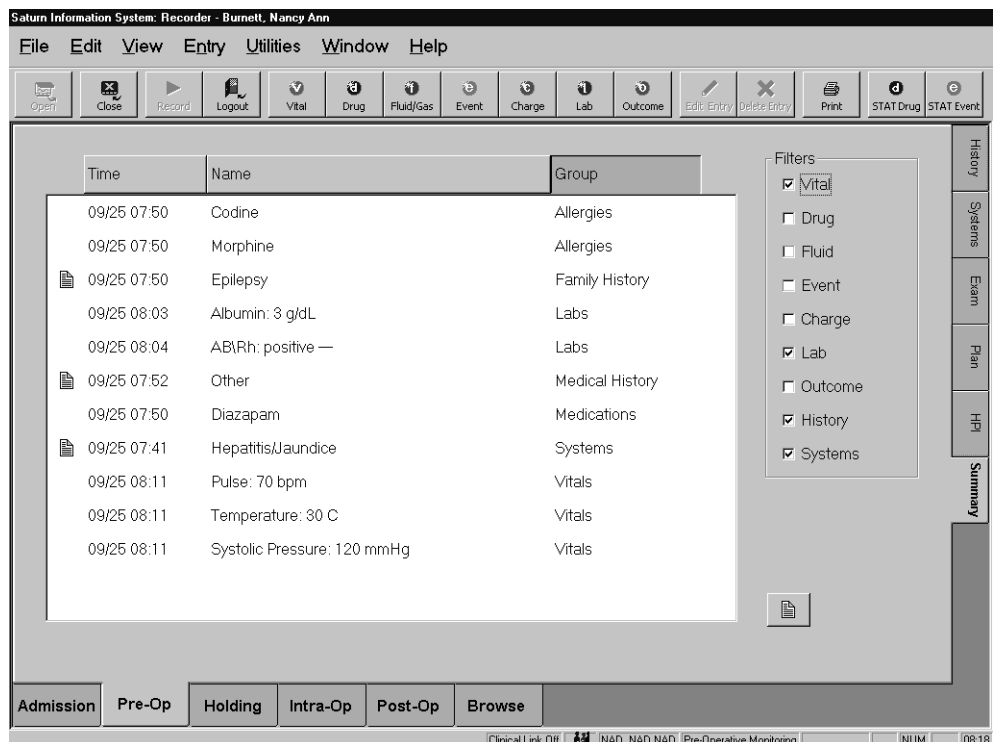
Figure 6-14. Pre-Op Section, Summary Page

2. In the Filters area, select one or more categories of data to be viewed (Vitals, Drugs, etc.) by selecting the check boxes. Select as many categories as you want. To clear a check box, click it again; the check is removed.

   Example: Figure 6-14 shows a list of all vital, lab, history and systems data in the case so far. To view less data, clear some of the check boxes. To view a single category of data, clear all the check boxes except the one you want listed in the window.

3. To sort the data in the window, do one or more of the following:

   • Click the Time header to list the items chronologically.

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- Click the Name header to list the items alphabetically.

- Click the Group header to list the items according to their category or group (vitals, drugs, fluids, etc.).

4. To change only the time of an entry, select the item and then click or press its date/time in the Time column. Two arrows appear beneath the date and time (Figure 6-15).
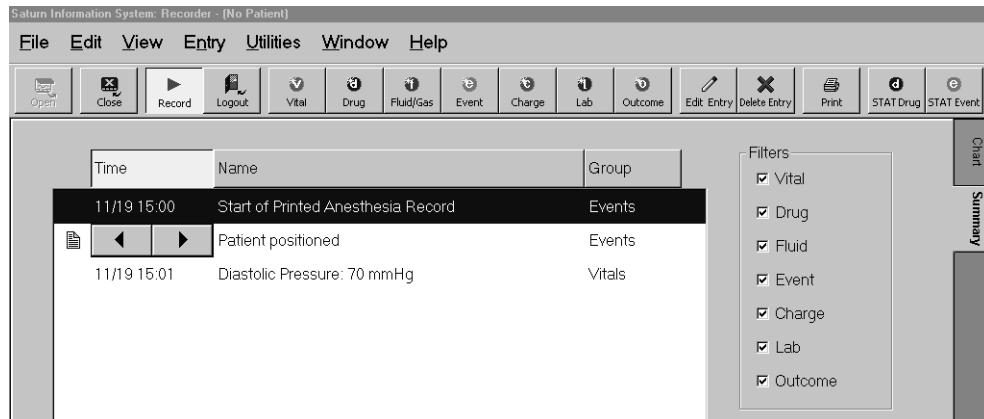
Figure 6-15. Changing the Time of a Data Entry (Shortcut)

Click the left arrow to select an earlier time (decreases by one minute); click the right arrow to select a later time (increases by one minute). When you are finished, click or press elsewhere on the screen. The new time appears in the time column, and the arrows fade from view.

5. To change any of an item's properties (time, date or attachment contents), double-click the item. The item's Edit Entry dialog box appears (Figure 6-16).
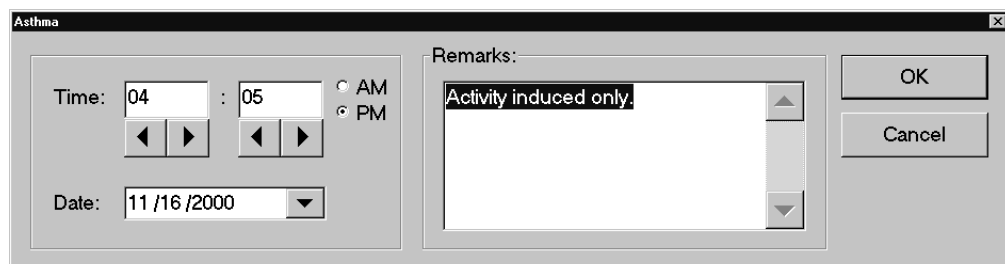
Figure 6-16. Edit Entry Dialog Box (Example)

Note: Edit Entry dialog boxes differ, depending on the data type. However, step 5 applies to all Edit Entry dialog boxes.

6. Do one or more of the following:

- Click the arrow keys in the Time boxes to change the time, as well as the applicable AM or PM option button.

- Place the pointer in the Date box and type in another date. Or, press the down arrow in the Date box. A calendar appears. Select a date on the calendar.

    Note: To select a date in a future month, click the arrow to the right of the calendar heading. To select a date in a previous month, click the arrow to the left of the calendar heading. The date you select now appears in the Date box.

- Insert the pointer in the Remarks text box and type new text or delete existing text.

- Change any other data in the dialog box.

7. Press the OK button to keep the new information you have just entered, or press Cancel to start over.

8. To view the contents of attachments, press the Attachment button below the Filters area on the screen. The contents of the attachments are displayed for viewing (Figure 6-13). To hide the contents, click or press the Attachment button again.

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The following table describes the Summary page options.

Note: There are defaults only for the Filters area of the Summary page.

Table 6-5. Summary Page Options (Pre-Op)

Option	Description
Time	The time entered for a manually entered item. • Clicking or pressing on the Time header arranges items chronologically. • Clicking on the date/time of an item in the window displays right and left arrows which you can press to modify the time. • Double-clicking an item in the window allows you to change its properties (time, date, remarks) in the properties dialog box.
Name	The name of an item in a particular category, such as acetaminophen (Drug), Anesthetic induction (Event), etc. • Clicking or pressing on the Name header arranges items alphabetically. • Double-clicking an item in the window allows you to change its properties (time, date, remarks) in the properties dialog box.
Group	The category or data set to which items belong. • Clicking or pressing on the Group header arranges items by category. These categories are listed in the Filters area of the screen. • Double-clicking an item in the window allows you to change its properties (time, date, remarks) in the properties dialog box.
Filters	Contains the categories of data that you can summarize and view. Choices include Vital, Drug, Fluid, Event, Charge, Lab, Outcome, History and Systems. • You can view one or several categories at once by selecting the check boxes. • Clear or deselect the check boxes to limit one or several categories from being displayed in the window. *Defaults:* Drug and Event items
Vital	When you select the Vital check box, a list of vitals information is displayed. The list contains items you entered manually using the Vital button on the toolbar.
Drug	When you select the Drug check box, a list of medication information is displayed. The list contains items you entered manually using the Drug button on the toolbar.

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Table 6-5. Summary Page Options (Pre-Op) (continued)

Option	Description
Fluid	When you select the Fluid check box, a list of fluid and/or gas information is displayed. The list contains items you entered manually using the Fluid button on the toolbar.
Event	When you select the Event check box, a list of events is displayed. The list contains items you entered manually using the Event button on the toolbar.
Charge	When you select the Charge check box, a list of hospital charges is displayed. The list contains items you entered manually using the Charge button on the toolbar.
Lab	When you select the Lab check box, a list of labs is displayed. The list contains items you entered manually using the Lab button on the toolbar.
Outcome	When you select the Outcome check box, a list of outcome information is displayed. The list contains items you entered manually using the Outcome button on the toolbar.
History	When you select the History check box, a list of patient historical data that you entered on the History page (Medications, Allergies, Family History, Surgical History, Anesthesia History, and Medical History) is displayed. • If there are attachments containing important notes about a History item, a paper icon will appear next to it in the window. See the Attachment Button below for further information.
Systems	When you select the Systems check box, a list of patient systems data that you entered on the Systems page (Respiratory, Hepato/Gastrointestinal, Cardiovascular, Neuro/Musculoskeletal, Renal/Endocrine and Other) is displayed. • If there are attachments containing important notes about a Systems item, a paper icon will appear next to it in the window. See the Attachment Button below for further information
Attachment Button	Located below the Filters area on the Summary page, the Attachment button allows you to view comments of any item listed in the window that has a paper icon next it. • Press the Attachment button; the contents are displayed. • Press the Attachment button again to remove the contents from view.

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7

Entering Holding Data

This section explains how to view and enter data gathered while the patient awaits surgery.

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Entering Holding Data

You use the Holding section of Recorder to enter holding data as well as view summary data gathered during the presurgical phase. Holding data, such as the patient's surgical risk factor, preprocedure status, and the patient's location while in the holding and surgical phases, is recorded on the Chart page. Summaries of data collected during the holding phase can be viewed on the Summary page. You can return to the Holding section at any time to add new information or edit previously entered information.

Depending on the security rights configured by the system administrator, Intra-Op users also may have read-only or total access to data in the Holding section (see "Entering Intra-Op Data" on page 8-2). The tabs remain dimmed for sections that have not been configured.

Before You Begin Recording

Your workstation may have been configured by the system administrator to "load an environment" for each case you record. If this is so, the data (automatic data, time scales, fluid balance, event bar, etc.) that will appear in the grid and graph areas of a Chart (Holding, Intra-Op and Post-Op) has been selected already.

However, if no environment is loaded, or no data has been pre-configured to appear in the grid and graph sections of a Chart, you must configure it for each case by selecting the Case View Settings option on the View menu. Refer to "Changing General Display Parameters" on page 8-10 for more information.

Prerequisites

- The case must be open and the Holding tab must be selected.
- Holding must be selected in the Workstation Type list on the Utilities menu.

Procedure

Follow this procedure to enter or view data while a patient awaits surgery.

Press the Holding tab at the bottom of the Recorder window, and then press the Chart tab.

–Or–

On the View menu, choose Holding and then Chart.

–Or–

On the keyboard, press ALT, V, H, and then press ENTER.

The Holding section Chart appears (Figure 7-1 on page 7-3).

Figure 7-1. Holding Section, Chart

Chart

Besides entering presurgical data, the Chart page lets you view the data automatically entered by the Saturn program (or manually entered by you) in the grid and graph areas of the page.

Note: For more information about manipulating data on the Chart, refer to "Understanding the Chart" , "Interpreting Automatically Collected Data" , "Changing General Display Parameters" , and "Interacting with the Chart" in Section 8.

Prerequisite   The case for which you want to enter or view holding information must be open and the Holding section tab must be selected.

Procedure   Follow this procedure to enter or view preoperative holding data.

1. Select the Chart tab. The Chart page appears (Figure 7-1 on page 7-3).

2. In the Risk area, select the patient's surgical risk factor in the Surgical Risk box by typing a number (one through five), or by clicking on the down arrow key and selecting a number from the list.

3. In the Location area, do the following:

   • Select the Holding/Induction location for the patient during the holding phase by clicking the down arrow and choosing the area from the list.

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- Select the Intra-Op/OR location for the patient's surgery by clicking the down arrow and choosing the location from the list.

4. In the Pre-Procedure Status area, select the Add button. The Add Pre-Surgical Status dialog box appears (Figure 7-2).

Figure 7-2. Add Pre-Surgical Status Dialog Box, Chart

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5. Select items from the list of options by doing one or more of the following:

- Select the Entries header to sort the list of items according to their entry numbers. Then scroll through the list and click a check box to select an item.

- Select the Name header to sort the list items alphabetically. Then scroll through the list and click a check box to select an item.

- Type the letters of the item you want to find. Entries beginning with the letters you typed will appear in the speed search text box (Figure 7-2 on page 7-4). Select the check boxes next to the items you want to add to the patient's holding data.

- To create an attachment for an item, select the item's name (not the check box) in the Add Pre-Procedure Status dialog box. The item's Edit Entry dialog box appears (Figure 7-3). Type a remark or edit existing data.

Figure 7-3. Edit Entry Dialog Box, Chart

6. Press the OK button. The items you selected now appear in the Pre-Procedure Status window.

7. Items with the "paper" icon next to them in the Pre-Procedure Status window have attachments containing the remarks. To view the attachment, press the Attachment button. The comments appear in the window. To hide the comments, select the Attachment button again.

8. In the Holding Staff area, select the Edit button. A list of staff names appears in the Select Holding Staff dialog box (Figure 7-4 on page 7-6).

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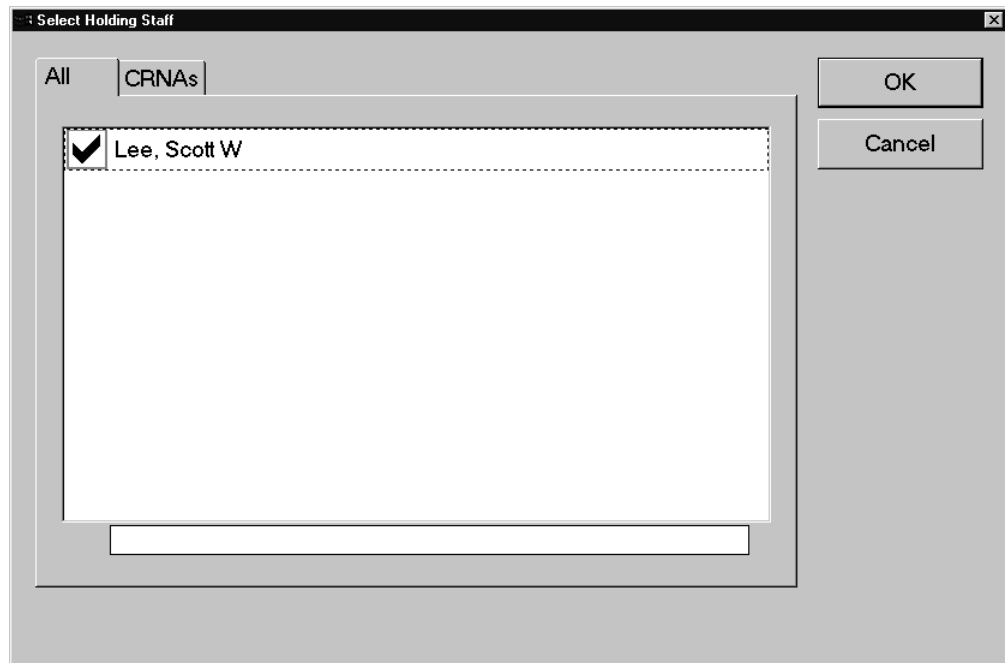
Figure 7-4. Select Holding Staff Dialog Box, Chart

9. Select one or more check boxes, then press the OK button. The names you selected appear in the Holding Staff window.

10. If you need to enter an electronic signature, select a staff name and press the Sign button. Refer to "Electronic Signatures" on page 2-34 for more information.

Note: To enter an electronic signature, a staff person must have an assigned User Logon name and Password. Staff members with electronic signatures can sign into the Holding section several times in a case. For example, if a staff person signs in to relieve another staff member, and then the original staff member returns to resume working on the case, the returning staff member can sign in again.

11. To remove an item from the window, select it and press the DELETE key or the Delete Entry button on the toolbar.

Important: Staff members who use an electronic signature cannot be deleted from the case without entering the staff's password in the electronic signature dialog box.

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Fluid Balance   The optional fluid balance grid can be displayed in the lower portion of the grid area on the Holding Chart by selecting the Fluid Balance check box on the Holding tab of the Case View Settings option on the View menu. The fluid balance and a perioperative balance are calculated. Refer to "Changing General Display Parameters" on page 8-10 for more information.

The fluid balance grid consists of four rows (all values are converted and displayed in milliliters (ml)):

- The first row displays the *fluid in* totals for the chart.
- The second row displays the *fluid out* totals for the chart.
- The third row displays the balance totals for the chart (*fluid in* minus *fluid out*)
- The fourth row displays the overall (Peri-Op) balance total.

Refer to the section "Adding and Modifying Fluid/Gas Entries" on page 11-1 for complete details.

The following table describes the Chart options in the Holding section.

Table 7-1. Chart Options (Holding)

Option	Description
ASA (PS)	The patient's ASA (American Society of Anesthesiologists) Physical Status (PS) upon admission. *Note:* You cannot edit this data. The system obtains it from the Plan page in the Pre-Op section, which is described in Table 6-4 on page 6-21. *Default:* The value entered on the Plan page of the Pre-Op section.
Surgical Risk	The assessed risk to the patient of undergoing anesthesia. You can select a value from 1 (lowest risk) to 5 (highest risk). *Default:* None
Holding/ Induction	The location of the patient prior to entering the Intra-Op area or the OR. *Default:* None
Intra-Op/OR	The operating room or other location planned for the surgery. *Default:* None
Pre-Procedure Status	The preoperative status of the patient, i.e., apprehensive, calm, chart reviewed, last food & drink, etc. *Default:* None

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Table 7-1. Chart Options (Holding) (continued)

Option	Description
Holding Staff	The names of the staff overseeing the patient before the patient enters the Intra-Op area or the OR. *Default:* None *Note:*The Sign button becomes active when you add or edit a staff person. You may select this button to enter an electronic signature. Refer to "Electronic Signatures" on page 2-34 for more information.
Grid Area	The grid area displays numerical case data in discrete blocks of time for the period of time that the patient is in the preoperative holding area. A triangle icon in the upper right corner of a grid cell means that remarks are attached to it. *Note:*If the Fluid Balance option is selected from the Case View Settings on the View menu, the grid appears in two sections. The bottom section of the grid reflects data related to fluid balance only. Refer to "Fluid Balance" on page 11-15 for further details.
Graph Area	The graph area displays graphical representations of automatically collected data from the time you start recording the case in the preoperative holding area to the time the patient leaves the preoperative holding area.

Summary

The Summary page (Figure 7-5) allows you to view a summary of manually entered data gathered during the holding period. The Filters area of the screen lets you control the list of data in the window by clearing the check boxes of the data sets you do not want displayed. Select as many check boxes as you want. See Table 7-2 on page 7-11 for a description of options on the Summary page.

Prerequisites The case for which you want to enter or view holding information must be open, and the Holding section tab must be selected.

Procedure Follow this procedure to view and edit patient summary data.

1. Select the Summary tab. The Summary page appears (Figure 7-5).
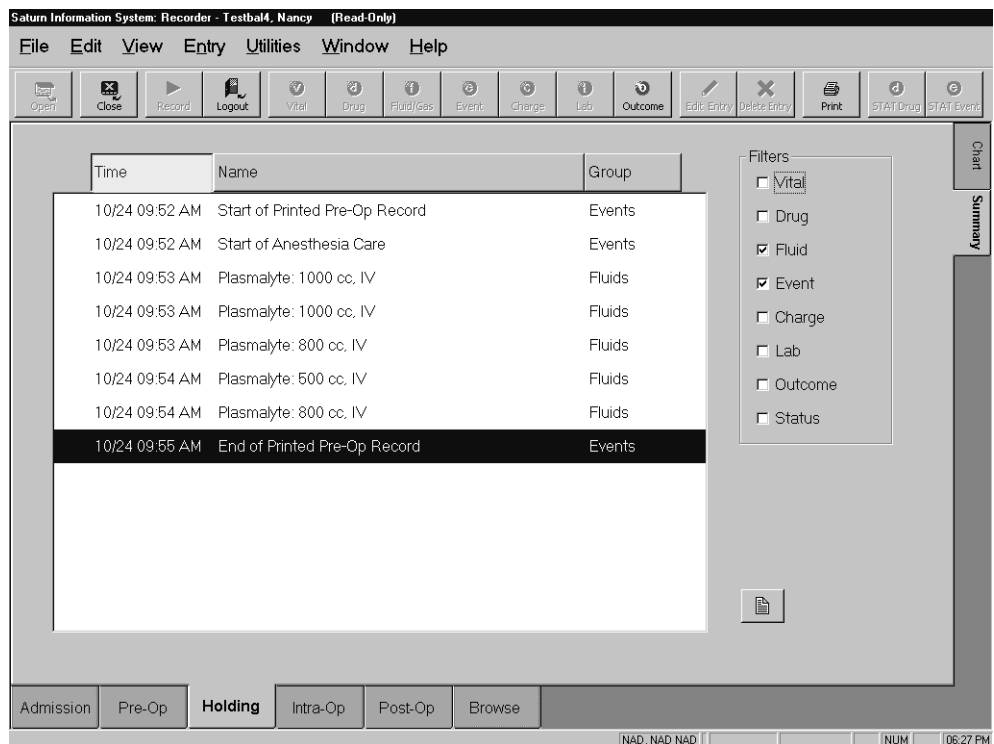
Figure 7-5. Holding Section, Summary Page

2. In the Filters area, select one or more categories of data to be viewed (Vitals, Drugs, etc.) by selecting the check boxes. Select as many categories as you want. To clear a check box, click it again; the check is removed.

   Example: Figure 7-5 shows a list of all fluids and events data in the case so far. To view other data as well, select more check boxes. To view a single category of data, clear all the check boxes except the one you want listed in the window.

3. To sort the data in the window, do one or more of the following:

   • Click the Time header to list the items chronologically.

- Click the Name header to list the items alphabetically.

- Click the Group header to list the items according to their category or group (vitals, drugs, fluids, etc.).

4. To change only the time of an entry, see step 4 under "Summary" on page 6-23.

5. To change any of an item's properties (time, date or attachment contents), double-click the item, or select the item and press ENTER or the Edit Entry toolbar button. The item's Edit Entry dialog box appears (Figure 7-6).

Figure 7-6. Edit Entry Dialog Box

6. Do one or more of the following:

- Click the arrow keys in the Time boxes to change the time, as well as the applicable AM or PM option button.

- Place the pointer in the Date box and type in another date. Or, press the down arrow in the Date box. A calendar appears (Figure 5-12 on page 5-15). Select a date on the calendar.

  Note: To select a date in a future month, click the arrow to the right of the calendar heading. To select a date in a previous month, click the arrow to the left of the calendar heading. The date you select appears in the Date box.

- Insert the pointer in the Remarks text box and type new text or delete existing text.

7. Press the OK button to keep the new information you have just entered, or press Cancel to start over.

8. To view the contents of attachments, press the Attachment button below the Filters area on the screen. The contents of the attachment are displayed for viewing (Figure 7-5 on page 7-9). To hide the contents, click or press the Attachment button again.

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The following table describes the Summary page options in the Holding section.

Note: There are defaults only for the Filters area on the Summary page.

Table 7-2. Summary Page Options (Holding)

Option	Description
Time	The time entered for a manually entered item. • Clicking or pressing on the Time header arranges items chronologically. • Clicking on the date/time of an item in the window displays right and left arrows which you can press to modify the time. • Double-clicking an item in the window allows you to change its properties (time, date, remarks) in the Edit Entry dialog box.
Name	The name of an item in a particular category, such as acetaminophen (Drug), Anesthetic induction (Event), etc. Clicking or pressing on the Name header arranges items alphabetically. Double-clicking an item in the window allows you to change its properties (time, date, remarks) in the Edit Entry dialog box.
Group	The category or data set to which items belong. • Clicking or pressing on the Group header arranges items by category. These categories are listed in the Filters area of the screen. • Double-clicking an item in the window allows you to change its properties (time, date, remarks) in the Edit Entry dialog box.
Filters	Contains the categories of data that you can summarize and view in the Summary page window. Choices include Vital, Drug, Fluid, Event, Charge, Lab, Outcome, and Status. • You can view one or several categories at once by selecting the check boxes. • Clear or deselect a check box to limit a category, which disallows it from being displayed in the window. *Defaults:* Drug and Event items
Vital	When you select the Vital check box, a list of vitals information is displayed. The list contains items you entered manually using the Vital button on the toolbar.
Drug	When you select the Drug check box, a list of medication information is displayed. The list contains items you entered manually using the Drug button on the toolbar.

Table 7-2. Summary Page Options (Holding) (continued)

Option	Description
Fluid	When you select the Fluid check box, a list of fluid and/or gas information is displayed. The list contains items you entered manually using the Fluid/Gas button on the toolbar.
Event	When you select the Event check box, a list of events is displayed. The list contains items you entered manually using the Event button on the toolbar.
Charge	When you select the Charge check box, a list of hospital charges is displayed. The list contains items you entered manually using the Charge button on the toolbar.
Lab	When you select the Lab check box, a list of labs is displayed. The list contains items you entered manually using the Lab button on the toolbar.
Outcome	When you select the Outcome check box, a list of outcome information is displayed. The list contains items you entered manually using the Outcome button on the toolbar.
History	When you select the Status check box, a list of pre-procedure status data that you entered on the Chart page is displayed. • If there are attachments containing important notes about an item, a paper icon will appear next to it in the window. See the Attachment Button below for further information.
Attachment Button	Located below the Filters area on the Summary page, the Attachment button allows you to view comments of any item listed in the window that has a "paper" icon next it. • Highlight the item in the window and press the Attachment button; the content is displayed. • Press the Attachment button again to remove the content from view.

8

Entering Intra-Op Data

This section explains how to use the Intra-Op Section, which displays graphical and numeric case data collected during surgery.

Entering Intra-Op Data

The Intra-Op section gives you access to data recorded during surgery. Depending on the security rights configured by the system administrator, Intra-Op users also may have read-only or total access to the Admission and Holding sections. The tabs remain dimmed for sections that have not been configured.

Some of the procedures in this section that pertain to the functions of the Chart also apply to the Holding and Post-Op sections, as indicated in the text.

Prerequisites
- The patient's case must be open and the Record button must be selected. For more information before recording a case, see "Changing General Display Parameters" on page 8-10 and "Recording a Case" on page 4-16.
- Intra-Op must be selected in the Workstation Type list on the Utilities menu.

Procedure
To open the Intra-Op section, press the Intra-Op tab at the bottom of the Recorder window, then press the Chart page tab.

–Or–
On the View menu, choose Intra-Op then Chart.

–Or–
On the keyboard, press ALT, V, I, C.

The Intra-Op section opens to the Chart page (Figure 8-1), which is described in this section of the manual. The items being recorded (vitals, drugs, fluids/gases, events, charges, labs and outcomes) are described in detail in individual chapters that follow.
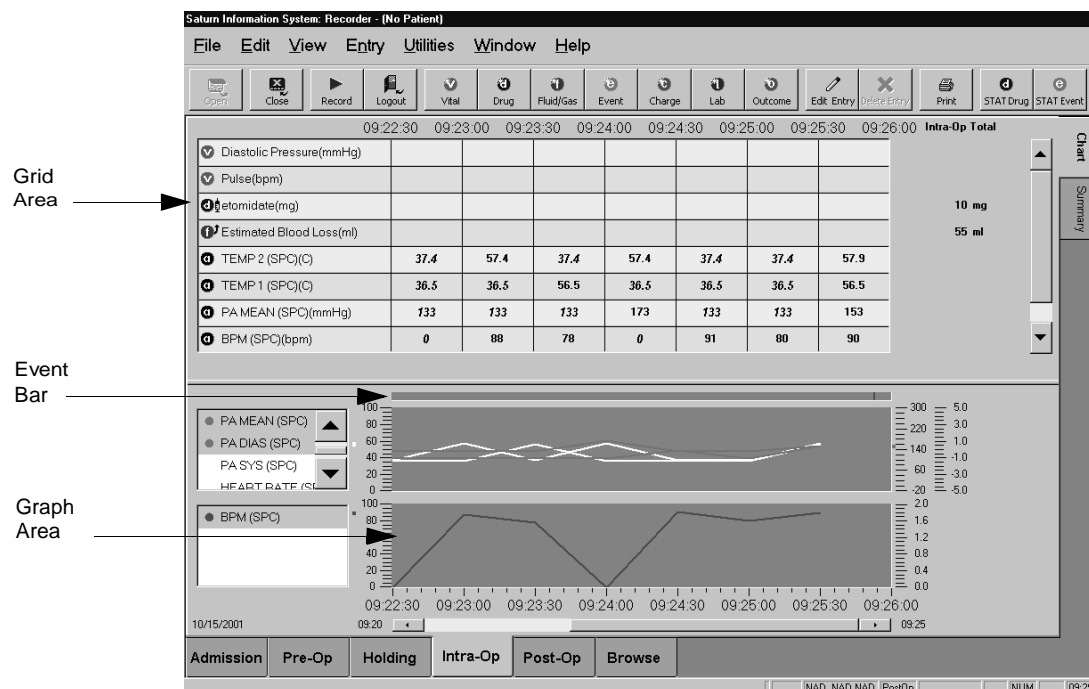
Figure 8-1. Intra-Op Section, Chart

Understanding the Chart

The Chart has two distinct areas: a grid area in the upper portion of the page and a graphic area in the lower portion of the page.

A splitter bar divides the grid and graphic areas. You can change the sizes of the two areas by dragging the splitter bar with the mouse or touch screen.

Grid Area

The grid area (Figure 8-2) contains a grid that displays numerical case data in discrete blocks of time. The time intervals at the top of the grid are displayed only after you start recording the case. (For instructions, see "Recording a Case" on page 4-16.) A triangle icon in the upper right corner of a grid cell means that remarks are attached to it.

Note: Up to 72 grid items can be printed.

Figure 8-2. Intra-Op Chart, Grid Area

Time Scale (Columns)

The grid and graphic areas of the Chart page share a common time scale for posting data. In the grid area, the time scale is displayed above the grid. You can set the time scale for 30 seconds, 1 minute, 5 minutes, 10 minutes, 15 minutes, 30 minutes or 60 minutes in the Case View Settings dialog box.

Data is always recorded at 30-second intervals (in the case record), regardless of the time scale selected in the Case View Settings dialog box. For example, if 60 minutes is selected in Case View Settings, then one reading is displayed per hour on the graph but 120 readings are recorded in the case record. The one reading that is displayed is not an averaged value, but rather the value recorded at that particular point in time. Refer to "Data Recording Times" on page 8-8 and "Before You Begin Recording" on page 8-9 for more information.

Data Categories (Rows)

Up to five data categories may be displayed on the grid. Each category is designated by a symbol:

Symbol	Data Category
❹	Data automatically collected by the system
❺	Data you enter about drugs administered
❻	Data you enter about fluids/gases administered (input appears with a drip icon and output appears with an arrow icon)
❼	Data you enter about vitals
❶	Data you enter about lab results

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If there are more rows of data items than can fit on the grid, a vertical scroll bar (Figure 8-2 on page 8-3) appears to the right of the grid. Moving the scroll bar up or down displays rows that are currently hidden from view.

Data Entries
(Cells)

Single Dose Cells

Each data entry, or grid cell, represents a numerical measurement for the last value of the data parameter shown in the row header (i.e., glucose), during the time interval shown in the column header (i.e, 11:20).

Example: The grid cell in Figure 8-2 on page 8-3 that intersects the row labeled *rocuronium* and the column bound by *11:20* and *11:35* contains the data entry *50*. This means that a 50 cc dose of rocuronium was administered between 11:20 and 11:35.

Multiple Dose/Entry Cells

Cells for manually entered drug and fluid/gas data may contain data corresponding to multiple entries. In this case, the dosage is followed by parentheses with two or more dots between them. The number of dots indicates the number of individual doses administered in that time interval. These are multiple dose cells. The data entry in a multiple dose cell is the total amount of drugs or fluids/gases administered over *n* doses, unless the type of unit is a rate (i.e., cc/hr or ml//hour, etc.), in which case the last entry and the most recent entry are displayed (see Table 8-1). Additionally, fluids can have more than one bag running at a time. This is indicated by a number in brackets preceding the indicated fluid quantity.

Table 8-1. Multiple Entry Cells

Parameter(s)	Type of Entry	Exceptions	Example of Data Displayed on Graph
Drugs	Total for time period	None (no rate)	**600**
Drugs	Total for time period	If type of unit is a rate (i.e., ml/min)	**3/2**
Fluids	Total for time period	None (no rate or ascending/descending	**15{..}**
Fluids	Total for time period	If type of unit is a rate (i.e., cc/hr)	**5/6**
Fluids (must be more than one bag)	Total for time period	**Ascending or Descending**	**[2]100{...}**
Automatic Data	Last entry	None	**0.4**
Vitals	Last entry	None	**126**
Labs	Last entry	None	**5**

For labs, vitals and automatically collected data with multiple entries, the latest entry time in the cell is displayed.

Example: The grid cell that intersects the row labeled *rocuronium* and the column bound by *12:05* and *12:20* (Figure 8-2 on page 8-3) contains the data entry *20(..).* This means that two separate doses of rocuronium were administered between 12:05 and 12:20, and that the total of the two doses is 20 cc.

Automatically-Collected Data Cells

Cells for automatically collected data can contain single and multiple entries. If the cell contains multiple entries, the total entries for the time period is displayed. The data in these cells is updated continuously to display the latest recorded total value. (For further information, see "Interpreting Automatically Collected Data" on page 8-8.)

Example: The grid cell that intersects the row labeled *Insp. Isoflurane* and the column bound by *12:05* and *12:20 (*Figure 8-2 on page 8-3) contains the data entry *0.4*. This means that the patient received 0.4% of Insp. Isoflurane at 12:20.

Totals

A row that contains manually entered data (<u>drugs</u> or fluids/gases) can include a total at the end of the row. (Rows with automatically collected data never have totals.) The type of total, if any, depends on the totaling method you select when you enter the drug or fluid/gas data into the system. The totaling methods include:

Method	Explanation
None	Disables the totaling function
Manual	Lets you enter the total manually
Auto	Calculates a cumulative total
Ascending	The total increases with time (used for drip rates for liquids)
Descending	The total decreases with time (used for drip rates for liquids)
Last Entry	Uses the last entry as the total

Entering Drug and Fluid/Gas Data

See "Adding Drug Entries" on page 9-2 and "Adding Fluid/Gas Entries" on page 11-2 for more information.

Fluid Balance

The optional fluid balance grid can be displayed in the lower portion of the grid area on the Intra-Op Chart by selecting Case View Settings from the View menu. The fluid balance and a perioperative balance are calculated.

The fluid balance grid consists of four rows (all values are converted and displayed in milliliters (ml)):

- The first row displays the *fluid in* totals for the chart.
- The second row displays the *fluid out* totals for the chart.
- The third row displays the balance totals for the chart (*fluid in* minus *fluid out*)
- The fourth row displays the overall balance total.

Refer to the section ""Adding and Modifying Fluid/Gas Entries" on page 11-1 for complete details.

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Graphic Area The graphic area (Figure 8-3 on page 8-6) displays graphical representations of automatically collected data from the time you start recording the case to the time you stop recording the case. (See "Recording a Case" on page 4-16 and "Stopping Case Recording" on page 19-2 for more information.)
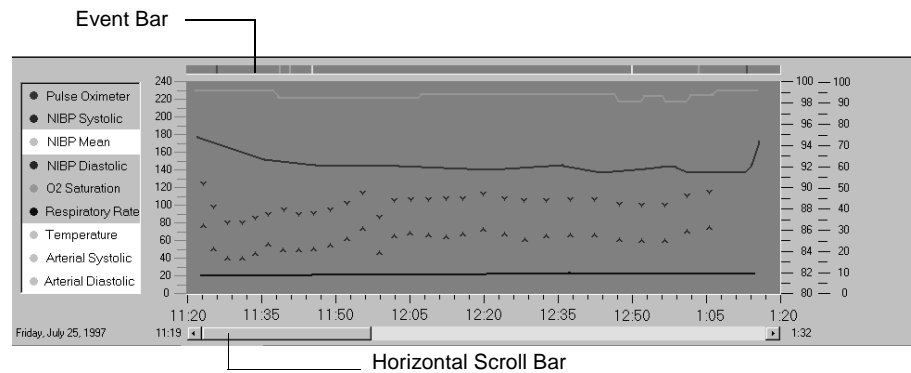
Figure 8-3. Intra-Op Chart, Graphic Area

Up to three types of graphs may be shown, using Table 8-6 on page 8-12:

- Ventilation data
- Cardiovascular data
- Gas data

An Event bar can also be displayed at the top of the graphic area by selecting it from the Case View Settings option on the View menu. The Event bar contains a marker for each event you enter during the case.

Parameter Lists To the left of each graph is a list of parameters that may be included in the graph. Only highlighted parameters are graphed. When a parameter is highlighted, the circle next to it indicates its display color in the graph.

If there are more parameters than can fit on a graph's parameter list, a vertical scroll bar appears to the right of the list. Moving the scroll bar up or down displays parameters that are currently hidden from view.

For instructions on selecting parameters to display, see "Displaying Parameters on a Graph" on page 8-20.

Time Scale (Horizontal Axis) The graphic area shares a common time scale with the grid area. In the graphic area, the time scale is displayed near the bottom of the page. You can set the time scale for 30 seconds, 1 minute, 5 minutes, 10 minutes, 15 minutes, 30 minutes or 60 minutes. (For further information, see "Before You Begin Recording" on page 8-9.)

If the time line for the case extends beyond the page, a horizontal scroll bar appears at the bottom of the page. Moving the scroll bar left or right displays time intervals that are currently hidden from view.

Note: Remember that the time scale is common to the grid and graphic areas. The horizontal scroll bar, therefore, is also common to both areas of the Intra-Op Chart. Its placement in the graphic area is for your convenience.

Measurement Scales (Vertical Axis)

Each graph has one or more vertical scales on its left and right axis. The following tables describe the scales for each graph and the parameters that you measure on each scale.

Table 8-2. Cardiovascular Parameter Scales

Scale	Range	Parameters
Left	0 – 100	SPO_2, CO, Temperature
Right 1	-20 – 300	Blood Pressure (IBP, NIBP, and WP) Pulse/Heart Rate
Right 2	-5 – +5	ST Segment

Table 8-3. Gas Parameter Scales

Scale	Range	Parameters
Left	0 – 100	CO_2, Flow Rate, Air, O_2, N_2O, Fresh Gas, Insp/Exp/FG (N_2O and O_2—Fast/Slow), Insp/Exp/FG Agent
Right 1	0 – 80	CO_2
Right 2	0.0 – 10.0	CO_2

Table 8-4. Ventilation Parameter Scales

Scale	Range	Parameter
Left	0 – 100	Breathing Pressure (PEEP, PEAK, MEAN), Respiratory Rate, Minute Volume
Right	0.0 – 2.0	Tidal Volume

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Event Bar

The Event bar at the top of the graphic area is a pictorial representation of events (start/stop times, the time of intubation, change in patient position, etc.) that you manually enter into the system during the case. Each marker on the Event bar denotes an event. The event markers are color coded by event categories:

Event Category	**Color Code**
Start/Stop Times	Red
Airway	Light Yellow
Patient Position	Light Green
Artifact	White
Template, Miscellaneous	Light Cyan

You can sometimes deduce the precise nature of an event by carefully examining the Event bar. For example, two red event markers at the beginning of the case would normally indicate the Start of Anesthesia and Start of Surgery events.

For more information about events, see "Editing Event Entries" on page 10-13.

Note: The Event bar must be selected using the Case View Settings option on the View menu. Refer to Table 8-6 on page 8-12 for more information."Adding Event Entries" on page 10-4

Interpreting Automatically Collected Data

When you press the Start Record button on the toolbar, Recorder starts collecting and displaying data on the graphs of the Holding, Intra-Op or Post-Op sections, depending on the workstation type selected in the workstation configuration. This data collection and display is automatic, meaning that no additional input is required of you after you press Start Record. (For more information on the Start Record function, see "Beginning a Case" on page 4-1.)

Because of the nature of the data and equipment involved in automatic data collection, Recorder must sometimes make decisions that affect how the data is processed and displayed. The following pages describe how Recorder works in these instances so that you can better interpret the data you see.

Data Recording Times

Recorder records (i.e., enters into the case record database) a median value based on sample measurements collected every 2 seconds over the previous 30-second time period. Refer to "Time Scale (Columns)" on page 8-3 for more information.

Example: The value of a displayed data item with a recording time of 10:05 is the median of sample values collected between 10:04:30 and 10:05:00.

Data Sources

Recorder occasionally has more than one source of data for some automatically collected data categories, such as blood pressure. When you start recording a case, Recorder selects only one source to display on the graph. The selection is based on a predetermined hierarchy, shown in Table 8-5 on page 8-9.

Example: For a pulse measure, Recorder first tries to find O_2 saturation (SPO_2). If O_2 saturation is unavailable, Recorder looks for IBP as a substitute. If IBP is unavailable, Recorder looks for CBP, and so on.

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If the source that Recorder selected at startup becomes unavailable, you can display data from another source on the parameter list. Refer to "Displaying Parameters on a Graph" on page 8-20 for more information.

Note: Even though data is displayed from only one source when you start recording the data, the program records data from all available sources.

Table 8-5. Data Source Preferences

	Pulse	IBP	Respiration Rate	CO_2	Temperature	O_2 Saturation
Most Preferred Source	SPO_2	ART	Spiromed/ Volume	MmHg	Temp1	SVO_2
	IBP	P2 ART	CO_2	kPa	Temp2	SPO_2
	CBP	CVP	Unknown	%		
	NIBP	PA				
	ECG	LAP				
	Unknown	RA				
		RV				
		TBP				
		P1				
		P2				
		P3				
		P4				
Least Preferred Source		CBP				

Before You Begin Recording

Your workstation may have been configured by the system administrator to "load an environment" for each case you record. If this is so, the data (automatic data, time scales, fluid balance, event bar, etc.) that will appear in the grid and graph areas of a Chart (Holding, Intra-Op and Post-Op) has been selected already.

However, if no environment is loaded, or no data has been pre-configured to appear in the grid and graph sections of a Chart, you must configure it for each case by selecting the Case View Settings option on the View menu. Refer to "Changing General Display Parameters" on page 8-10 for more information.

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Changing General Display Parameters

You can change certain elements of a Chart for the current case by modifying the *case settings*. Case settings are saved with the patient case. When you open the case, it uses the last settings entered.

Note: This section applies to the Charts in the Holding, Intra-Op and Post-Op sections.

Prerequisite   The case for which you want to change settings must be open.

Procedure   Follow these steps to change display parameters for the current case.

1. From the View menu, choose Case View Settings.

   The Case View Settings dialog box appears.

Figure 8-4. Case View Settings Dialog Box

2. Click the Holding, Intra-Op or Post-Op tab, depending on your workstation type, then change the Case View settings. For details, see Table 8-6 on page 8-12.

3. If you select Automatic Data in the Grid Section, the Settings button is activated (Figure 8-5).

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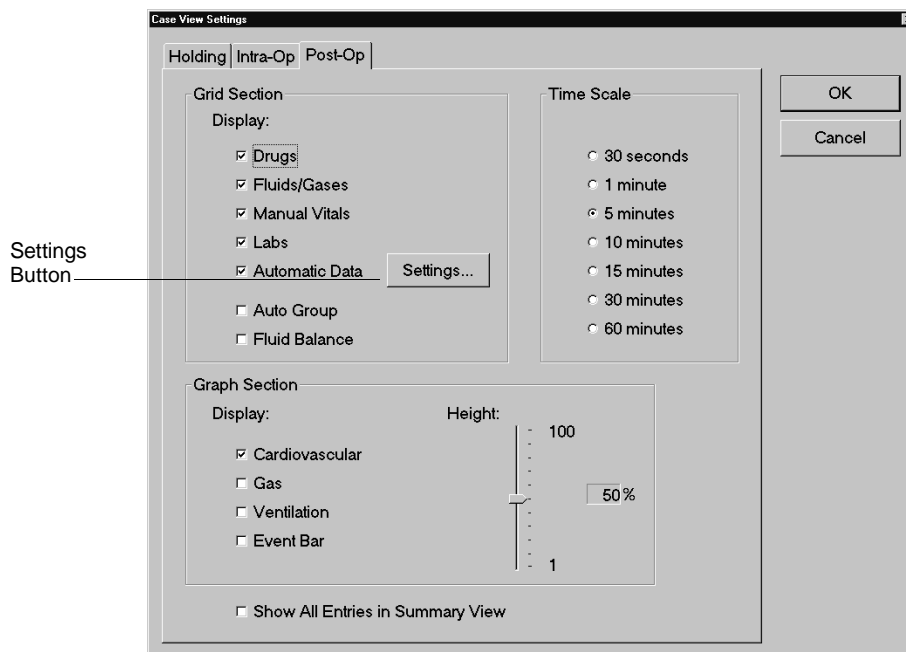
Figure 8-5. Activated Settings Button

4. When you press the Settings button, the Settings dialog box appears (Figure 8-6). Select the check boxes for the data you want displayed in the Grid Section. Select the plus (+) sign to view a sublist for each category. If you check a box with a plus (+) sign, its entire sublist is selected as well. To deselect an item so that it is not displayed in the grid, select or click the check box to clear it.
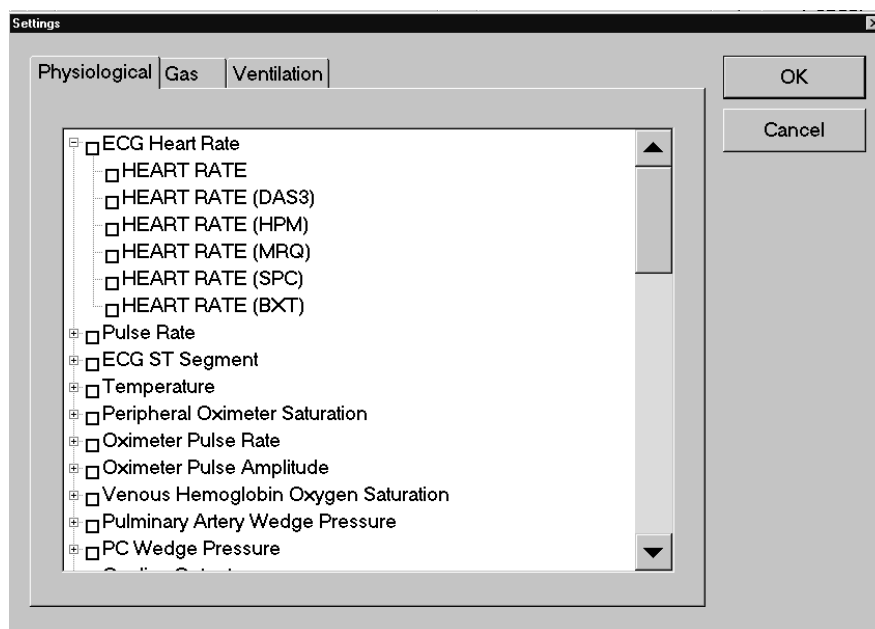
Figure 8-6. Automatic Data Settings Dialog Box

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5. Press the OK button to save your changes.

The following table describes the Case View Settings options.

Table 8-6. Case View Settings Options

Option	Description
Grid Section	
Drugs	Indicates that data you enter about drug administration is displayed in the grid area of the Chart. Drug data on the Chart grid is preceded by the symbol ❻. *Default:* Checked
Fluids/Gases	Indicates that data you enter about fluid/gas administration is displayed in the grid area of the Chart. Fluids/Gases data on the Chart grid is preceded by the symbol ❶ or ❾ (input appears with a drip icon and output appears with an arrow icon). *Default:* Checked
Manual Vitals	Indicates that data you enter about vitals is displayed in the grid area of the Chart. Vitals data on the Chart is preceded by the symbol ❼. *Default:* Checked
Labs	Indicates that data you enter about lab results is displayed in the grid area of the Chart. Lab data on the Chart is preceded by the symbol ❶. *Default:* Checked
Automatic Data	Indicates that you can copy automatically collected data from the graphic area of the Chart to the grid area of the Chart. (See "Copying Graph Parameters to the Grid" on page 8-20.) Automatically collected data on the Chart grid is preceded by the symbol ❸. *Default:* Checked
Settings Button	When pressed, the Settings dialog box appears. You may select various data to be displayed by clicking the check boxes. If a check box has a plus (+) sign next to it, then all items in the sublist are automatically selected. • Clicking on the plus (+) sign displays the items in the sublist and allows you to select only the ones you want. Tabs include Cardiovascular, Gas, and Ventilation.
Auto Group	Indicates that auto grouping is enabled on the grid section. Items will be grouped according to the icon image that reflects the item type. *Default:* Not checked

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Table 8-6. Case View Settings Options (continued)

Option	Description
Fluid Balance	Indicates the fluid balance calculated for fluids in, fluids out, balance, and perioperative balance. *Note:* If the Fluid Balance option is selected from the Case View Settings on the View menu, the grid appears in two sections. The bottom section of the grid reflects data related to fluid balance only. Refer to "Fluid Balance" on page 11-15 for further details. *Default:* Not checked.
Time Scale Area	
Time Scale	The interval for the time scale on the Chart. You can mark one of the following intervals: 30 seconds 1 minute 5 minutes 10 minutes 15 minutes 30 minutes 60 minutes In general, shorter intervals are recommended for cases with an expected duration of less than 2-3 hours, and longer intervals are recommended for cases with an expected duration of more than 3 hours. *Default:* 5 minutes
Graph Section	
Cardiovascular	When checked, cardiovascular data is displayed on the Chart. *Default:* Checked
Gas	When checked, gas data is displayed on the Chart. *Default:* Not checked
Ventilation	When checked, ventilation data is displayed on the Chart. *Default:* Not checked
Event Bar	When checked, an Event bar is displayed on the Chart. *Default:* Not checked
Show All Entries in Summary View	Indicates that all data type entries (i.e., including those entered in between recording times) will be reflected on the Summary pages of the Holding, Intra-Op and Post-Op sections.
Height	The height of the graphic area of the Chart in comparison to the grid area of the Chart. *Default:* 50 percent

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Interacting with the Chart

The Chart is more than a data display. You can interact with different objects in the Holding, Intra-Op and Post-Op sections to change display features, and to enter and move data. You also can do the following on a Chart:

• Obtain a different view of the data
• Add, edit, or delete manually entered data
• Display automatically collected data
• Edit automatically collected data

Note: This section applies to the Chart pages of the Holding and Post-Op sections as well as the Intra-Op section.

Input Devices The same input devices that you use in other sections of the Recorder program may be used in the Chart. The most common input devices are:

• Touch screen
• Mouse
• Keyboard

Touch screens are always available on Draeger Medical, Inc. clinical workstations.

Selecting and Manipulating Objects

Some of the tasks you will perform require you to *select* or *drag and drop* objects on the Chart. Table 8-7 on page 8-15 explains how to perform these actions using the touch screen, mouse or keyboard. (You cannot use the keyboard to perform these actions.) If you have previous experience with graphical user interfaces, such as Windows NT, you may already be familiar with how to perform the actions described here.

Table 8-7. Selecting and Manipulating Objects on a Chart

Action	Object	Input Device	Method
Select (Highlight or mark an object for some subsequent action.)	Grid Cell Grid Parameter Graph Parameter	Touch Screen	Tap the object.
		Mouse	Click the object.
		Keyboard	(You can use the keyboard to select grid cells only.) Press an ARROW key that points from the currently highlighted cell in the direction of the cell you want to highlight. Press the key as often as required. If necessary, change direction by switching to another ARROW key.
Drag & Drop (Move or copy an object from one place to another.)	Grid Parameter Graph Parameter Splitter Bar Scroll Bar Slider	Touch Screen	**Drag:** Tap and hold the pointing device (e.g., finger, stylus) over the object to highlight it. Then, while maintaining contact with the screen, move the pointing device. As you move the pointing device, you will see a corresponding movement on the screen. **Drop:** When the object reaches the desired location, pull the pointing device away from the screen.
		Mouse	**Drag:** Click and hold the mouse button over the object to highlight it. Then, while continuing to hold the mouse button, move the mouse. As you move the mouse, you will see a corresponding movement on the screen. **Drop:** When the object reaches the desired location, release the mouse button.
		Keyboard	You cannot use the keyboard to drag and drop objects.

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Changing Grid and Graphic Area Sizes

You can use the splitter bar, a horizontal line that separates the grid and graphic areas, to adjust the height of the grid and graphic areas.

Procedure

Follow this procedure to change the size of the grid and graphic areas:

1. Move the mouse or pointing device over the splitter bar until you see a cross-bar.

2. When the crossbar appears, drag the splitter bar. As you drag the splitter bar, its highlight moves on the display.

3. When the highlighted bar reaches the location where you want to divide the screen, drop the bar.

   The grid and graphic areas are split at the location where you drop the highlighted splitter bar.

   Note: If one area of the grid is reduced to the point that all of its data does not fit on the page, one or more scroll bars will appear.

Using Scroll Bars

Scroll bars appear on the Chart only if all of the data for the case does not fit on the page. Scroll bars enable you to move through the data to show the portion of the display that is hidden from view.

Procedure

Follow this procedure to move the data columns and rows in and out of view:

1. To move the data one row or column at a time, press an arrow at one end of the vertical or horizontal scroll bar.

2. To move the data several rows or columns at a time:

   • Press and hold an arrow at one end of the scroll bar. When you reach the row or column you want to see, let go of the arrow.

   • Or, drag the slider bar in the direction of the hidden data. When you reach the row or column you want to see, drop the slider bar.

Sorting Grid Rows

You can move any grid row up or down on the grid.

Procedure

Follow this procedure to move rows up and down:

1. Drag the row from its current location toward the position where you want to insert it. As you drag the row, its category symbol moves on the display.

2. When the category symbol reaches the location where you want to insert it, drop it. The row is moved from its original location to the location where you drop it, unless Auto Group is selected in the Case View Settings dialog box, in which case the dropped item is snapped back with its group.

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Adding Data

You can add new drug, fluid/gas, event, charge, lab, or manual vital entries to the case while viewing the Chart. When you add a drug dose, fluid/gas dose, lab result, or vital, a new row is created on the grid. When you add an event entry, a new marker is placed on the Event bar. The addition of a new charge entry does not appear anywhere on the Chart. However, like all other added data items, the new charge becomes part of the case record and can be viewed on a Summary page.

The following procedure provides general instructions for adding a data item to the case on the Intra-Op Chart using the toolbar, the Entry menu, and the keyboard. For more information about adding a particular type of data, consult the section of this manual that discusses that type of data:

- "Adding Drug Entries" on page 9-2,
- "Adding Event Entries" on page 10-4,
- "Adding Fluid/Gas Entries" on page 11-2,
- "Adding Outcome Entries" on page 12-2,
- "Adding Lab Entries" on page 13-2,
- "Adding Manual Vital Entries" on page 14-2, and
- "Adding Charge Entries" on page 15-2.

Prerequisite   Make sure the case is recording.

Procedure   Follow this procedure to add data entries to the case:

1. On the toolbar, press the appropriate button:

Vital	Event	Outcome
Drug	Charge	STAT Drug
Fluid/Gas	Lab	STAT Event

   Or–
   On the Entry menu, chose one of these items:

Vitals	Events	Outcomes
Drugs	Charges	STAT Drug
Fluids/Gases	Labs	STAT Event

   –Or–
   On the keyboard, press one of the following key combinations:

To add vitals:	F4
To add drugs:	F5
To add fluids/gases:	F6
To add events:	F7
To add charges:	F8
To add lab results:	F9
To add outcomes:	F10

2. In the Add dialog box that appears, complete the information and then press the OK button.

   The data is added to the case record. If the data is a drug, manual vital, lab result, or fluid/gas, a row is also added to the grid as long as it is enabled in

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the Case View Setting dialog box. If the data is an event, a marker is also added to the Event bar.

Editing Data

While viewing any Chart, you can change data for any item listed on the grid.

The following procedure provides general instructions for editing data on a Chart. For more information about this and other methods of editing a particular type of data, consult the section of this manual that discusses that type of data:

- "Editing Drug Entries" on page 9-11
- "Editing Event Entries" on page 10-13
- "Editing Fluid/Gas Entries" on page 11-9
- "Editing Outcome Entries" on page 12-7
- "Editing Lab Entries" on page 13-8
- "Editing Manual Vital Entries" on page 14-7
- "Editing Charge Entries" on page 15-6

Procedure   Follow this procedure to edit Intra-Op data.

Note: In place of steps 1 and 2, double-click the cell and proceed to step 3.

1. Select the grid cell that contains the data you want to edit.

2. On the toolbar, press the Edit Entry button.

   –Or–
   On the Edit menu, choose Edit Entry.

   A dialog box for the selected cell appears.

3. If the dialog box has tabs at the top, press the tab that corresponds to the dose or entry you want to edit.

   Note: Tabs appear when the time interval you select on the grid contains more than one entry.

4. Complete the information in the dialog box and then press the OK button.

   The case record is updated. The grid may also be updated, depending on the changes you made.

Deleting Data

While viewing a Chart, you can delete data that is displayed on the Chart grid as long as the data is not automatically recorded data.

The following procedure provides general instructions for deleting data on a Chart. For more information about this and other methods of deleting a particular type of data, consult the section of this manual that discusses that type of data:

- "Deleting Drug Entries" on page 9-14
- "Deleting Event Entries" on page 10-14
- "Deleting Fluid/Gas Entries" on page 11-12
- "Deleting Outcome Entries" on page 12-8
- "Deleting Lab Entries" on page 13-11
- "Deleting Manual Vital Entries" on page 14-10
- "Deleting Charge Entries" on page 15-7

Procedure   Follow these steps to delete Intra-Op data.

1. Select the grid cell that contains the data you want to delete.

2. On the toolbar, press the Delete Entry button.

   –Or–

   On the Edit menu, choose Delete Entry. One of these messages appears:

   A Recorder confirmation message appears for single entry deletions (Figure 8-7). Select YES or No.
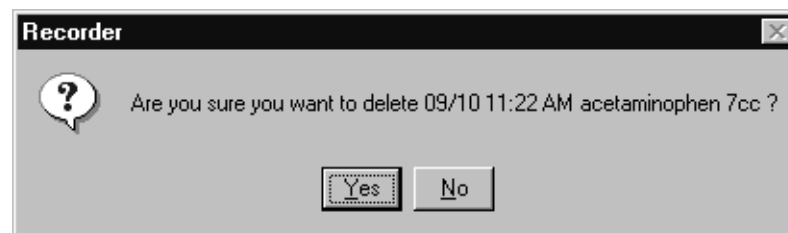
Figure 8-7. Single Entry Delete Dialog Box (Example)

A Delete dialog box appears for multiple entry deletions containing a checklist of the entries in the cell (Figure 8-8).
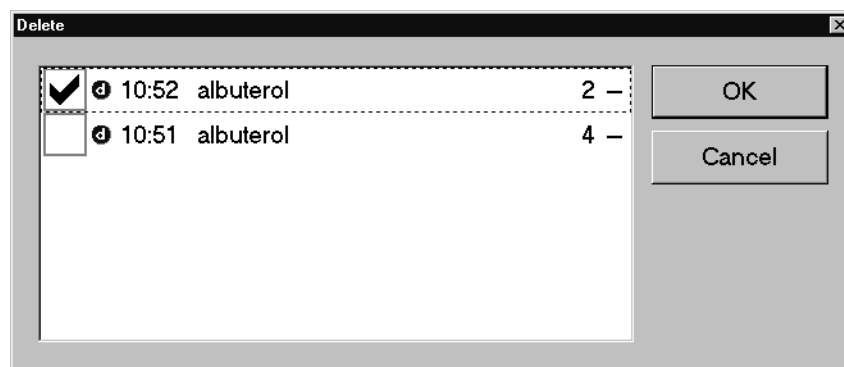
Figure 8-8. Multiple Entry Delete Dialog Box (Example)

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3. Do one of the following:

   - Press theYes button in the Recorder confirmation message to delete the single entry. Press No to escape without deleting.

   - Check the entries you want to delete in the Multiple Entry Delete dialog box, then press the OK button to delete one or more entries. Press Cancel to escape without deleting.

Displaying Parameters on a Graph

Every graph in the graphic area is associated with a list of automatically collected data parameters. From this list, you can select which parameters you want to display on the graph.

To display a parameter on a graph, simply select it in the parameter list. The parameter is displayed in the color shown next to its name on the list.

Copying Graph Parameters to the Grid

To see the numerical measurements for a parameter that is graphed, copy the parameter to the grid.

Prerequisites

A Chart tab must be selected.

Procedure

Follow this procedure to drag a parameter from the graph to the grid.

Before You Begin: Make sure the parameter is not already displayed on the grid. You cannot copy a parameter to the grid if it is already there.

1. Drag the parameter from its parameter list in the graphic area toward the grid area. As you drag the parameter, its category symbol moves on the display.

2. When the category symbol is between the grid rows where you want to insert the parameter, drop it.

   A copy of the parameter is added as a new row on the grid. (The original parameter remains on the graph. Select the item's row heading to redisplay the graph.) A value for each time interval sampled is inserted in the appropriate grid cell. Future values are added as they occur.

   Note: There can be multiple entries in a cell. However, the entry with the latest time is displayed in the cell.

Summary

The Summary page in the Intra-Op section works the same way as in the Holding section (see Figure 7-5 on page 7-9), except that it allows you to view and edit a summary of manually entered data gathered during the *Intra-Op* period. The Filters area of the screen lets you control the list of data in the window by selecting or clearing the check boxes of the data sets to be displayed. Select as many check boxes as you want.

Refer to "Summary" on page 7-9 and see Table 7-2 on page 7-11 for a description of options on the Holding Summary page which are identical to those of the Intra-Op Summary page, except for "History."

9

Adding and Modifying Drug Entries

This section explains how to add, view, update, delete, and calculate information about the drugs that you administer.

9   Adding and Modifying Drug Entries

Adding Drug Entries

You can enter information from anywhere in Recorder about the drug doses you administer during a case.

Note: If you want the drug entries to be part of the record, the case must be recording. Drug entries that you add before you start recording the case appear on the Summary page of the Pre-Op section. Refer to "Entering Pre-Op Data" on page 6-2 for more information.

Prerequisites   The case for which you are entering information must be open and recording.

Procedure   Follow these steps to add an entry about the administration of a drug dose. You can perform this procedure from anywhere in Recorder.

1. On the toolbar, press the Drug button.

   –Or–
   On the Entry menu, choose Drugs.

   –Or–
   On the keyboard, press F5.

   The Add Drug Selection dialog box appears (Figure 9-1). It contains one or more tabbed pages; each page contains a list of drugs from which you can select a drug to add an entry on the administration of that drug's dose.

   The default page is *Template*, which contains a list of all of the drugs that are available to you if you loaded an environment when you opened or created the case. The *All* page lists all drugs that are available for selection. Other pages appear after the *All* page (i.e., Induction, etc.) if you created these pages using the List Manager application. These other pages can contain lists of drugs that fall into categories that you choose and create.
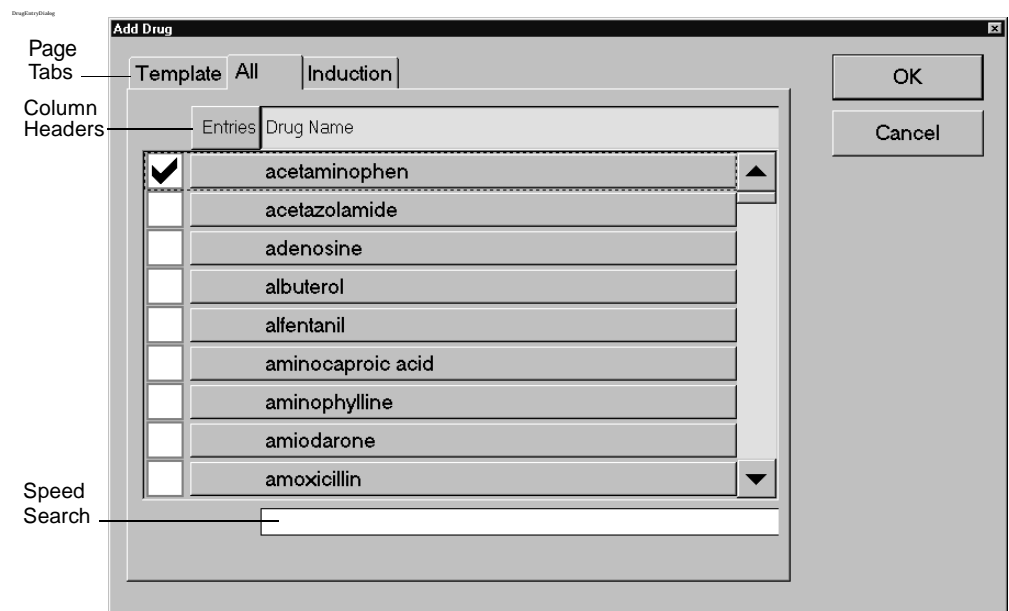
Figure 9-1. Add Drug Selection Dialog Box

Adding and Modifying Drug Entries | **9**

2. Select a page tab. You can change the order in which the list is sorted by pressing the column header you want to sort by.

   Example: To sort the list alphabetically by drug name, press the Drug Name column header (Figure 9-1). To sort the list to show which drugs have already been selected, press the Entries header. Or you can find the drug by doing a speed search. Refer to "Speed Search" on page 2-17 for more information.

3. Select one or more drug item check boxes.

4. Do one of the following:

   • If you checked only one item, click it (anywhere except in the check box). The Add Drug Entry dialog box appears (Figure 9-2).

   • If you checked several items, click OK. Now select the Chart page and select one of the drug items you just entered. The Add Drug Entry dialog box appears (Figure 9-2).

Figure 9-2. Add Drug Entry Dialog Box

5. Enter information about the drug you are administering. For details, see Table 9-1 on page 9-4 and "Using the Drug Dosage Rate Calculator" on page 9-18. If you exceed the allowable drug dose limit, a prompt appears. You must enter a dose within that drug's dosage limits, as configured in the List Manager program.

   Note: More than one tabbed page (Figure 9-2) will appear in the Add Drug Entry dialog box if you recorded a dose for this drug earlier in the case. For example, the tabs at the top of the pages will display the earlier times, plus a New Entry page.

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Use the keyboard to type important notes and information in the Remarks text box. A triangle icon appears in the upper right corner of a grid cell when you add remarks to a drug entry.

6. When you are finished entering information, press the OK button.

Note: When you enter or change data, you may be required to enter your password. If the Enter Password dialog box appears, refer to "Password Restricted Data" on page 2-39.

The dialog box closes and the information is added to the case record. The information is also added to the grid section of the Chart page, as discussed throughout this section.

Shortcut: If you are administering a drug that you have already entered into the case record, you may be able to use the Edit Entry button to enter the new dose. (See "Editing Drug Entries on a Chart Grid" on page 9-11.) Using the Edit Entry button is usually quicker because Recorder automatically fills in some of the dialog box information for you on the New Entry page. However, if you are entering a specific drug into the case record for the first time, you must use the Drug button.

The following table describes the options in the Add Drug Entry dialog box.

Table 9-1. Add Drug Entry Dialog Box Options

Option	Description
Time	The time of drug administration in *hh:mm* format. Leading zeros are not required. You can select the hours and minutes with the arrows, or enter them from the keyboard.
	Your system administrator determines whether your system will display 12- or 24-hour time. Valid values for 12-hour time are: 1 to 12 (hours), and 0 to 59 (minutes). When 12-hour time is used, you must also select the AM or PM option button. Valid values for 24-hour time are: 1 to 24 (hours), and 0 to 59 (minutes). When 24-hour time is used, AM and PM do not appear as selectable option buttons.
	Examples: 12:00 AM for midnight (12-hour time)
	12:00 PM for noon (12-hour time)
	24:00 for midnight (24-hour time)
	12:00 for noon (24-hour time)
	Default: For new drug entries, the current time. For previous drug entries, the last time entered.
Date	The date in *M/d/yyyy, yyyy.M.d*, or any other format in which your system administrator sets up your system. Leading zeros are not required. You can select the date from a drop-down calendar or enter it from the keyboard. Refer to "Selection Calendars" on page 2-26 for more information.
	Default: For new drug entries, the current date. For previous drug entries, the last date entered.

Table 9-1. Add Drug Entry Dialog Box Options (continued)

Option	Description
Unit	The unit of measure for the drug. You can change the default value by selecting another unit from the list box. *Default:* No default, or a site-specific default set by your system administrator.
Route	The route used to administer the drug. *Default:* No default, unless a site-specific default was set by your system administrator.
Totaling	The method of totaling when cumulative amounts of the drug are administered: None Disables the totaling function Manual Lets you enter the total manually Auto Calculates a cumulative total Last Entry Uses the last entry as the total The totaling method you select is applied to all of the drug entries. *Default:* Selected in List Manager
Dose	The drug dose. You enter the dose from the keyboard or select it from the keypad. Preconfigured doses may be assigned to some of the keypad keys to let you make common selections quickly. To calculate a drug dose, see "Dosage Calc Button" below. *Default:* None
Remarks	Type important remarks here (up to 2,048 characters). A triangle icon appears in the upper right corner of a grid cell when remarks are entered in this dialog box.
OK Button	Press the OK button when you are finished making changes. Any information you entered is saved to the program.
Cancel Button	Press the Cancel button when you want to escape the dialog box without saving the changes you have just made, or when you are viewing the information only, and do not want to make changes.
Stop Rate	This check box enables you to record the stop of infusion drugs with a rate-orientated unit of measure. Select the check box to set the rate to zero when the infusion is completed. *Default:* Not checked
Dosage Calc Button	Selecting this button opens the Drug Dosage Rate Calculator, which calculates a dose unit per weight per time rate (ug/k/min) using data that you enter into the Calculator. See Table 9-4 on page 9-19 for more details. *Default:* None

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Rate Oriented Drug Entries (Infusions)

An infusion is a drug that is configured with a rate orientated unit of measure. All gases are treated as infusions.

Infusion Example

After entering an infusion, the current rate will be shown in the cell, and subsequent cells will contain dashes. See Figure 9-3 for an example.

Figure 9-3. Infusions Displayed in the Grid Area

For example, at 11:20 an acetaminophen IV is started at 5 mcg/hr and then stopped at 1:20 at 10 mcg/hr.

- The start time is indicated by displaying the rate used for the beginning of the time cell, i.e., 5.

- A change in the rate of the infusion is indicated by entering the rate that was being used at the time of the rate change (in the drug's row in the column under the time when the rate changed), followed by a slash, followed by the new rate, i.e., 5/10.

- The stop time is indicated by displaying the rate used for the beginning of that time cell, followed by a slash, followed by a zero, i.e., 10/0.

Infusions at Close Case

If you close the case and an infusion has not stopped (i.e., you did not set the dosage to zero), you will be prompted as to whether or not the infusion should be stopped. If you press the YES button, the case will remain open so that you can enter the "0" dosage in the appropriate row and column. If you press the NO button, the case will close without the "0" dosage.

Infusion Units of Measure

The following table lists the different units and total units for infusion entries:

Table 9-2. Infusion Units of Measure

Units	Example	Total Units
amount/time	10cc/minute	(amount x time) = amount
amount/weight/time	10cc/kg/hour	(amount x time x weight) = amount
amount/weight/time	10cc/kg/hour	(amount x time) = amount/weight

Ascending and Descending Entries (Drips)

You can enter drip drug entries as regular bolus drugs. Starting and ending drip drug values are entered at appropriate beginning and ending times; totals are calculated according to any of the totaling methods described in Table 9-2 on page 9-6.

Adding Drug Entries STAT

A STAT drug entry can be entered at any time, and a case does not need to be open or recording when you add it. For example, if you are in an emergency situation, you can use the STAT Drug function to mark the date and time of a drug dose. If no case is open, the STAT Drug will be added to the next case opened, whether it's a new or existing case. When you have more time, you can update these entries with information about the drug dose administered to the patient.

Important: The STAT entries you make will be included in the next case opened at this workstation. Therefore, it is recommended that you open the patient's case if one already exists, or create the case by entering the patient's name or the data required to establish a new case (i.e., medical record number, etc.) as soon as possible. You can fill out the remaining boxes in the case later. Otherwise, you risk the chance that the STAT entries will be included in another patient's case.

Procedure   Follow these steps to add STAT drug entries.

Note: If you already pressed the STAT Drug button and are now ready to fill in the drug information, skip the first step.

1. From the toolbar, press the STAT Drug button.

   –Or–
   On the Entry menu, choose STAT Drug.

   –Or–
   On the keyboard, press F11.

   The date and time you actually press the STAT Drug button are recorded as the date and time the dose was entered/administered.

   Note: When you have time, come back and finish the remaining steps in this procedure.

2. On the Summary page, select the STAT DRUG you want to complete.

   Note: A STAT Drug entry appears on a Summary page when you select the Show All Entries in Summary View check box from the Case View Settings option on the View menu. It also appears if the STAT Drug button was pressed within the Start and End Record times for the selected Workstation Type.

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3. On the toolbar, press the Edit Entry button.

   –Or–
   On the Edit menu, choose Edit Entry.

   The Add Drug dialog box appears (Figure 9-1 on page 9-2).

4. Select a page tab (i.e., All, Anesthetic, Anti-rhythmic, etc.). You can change the order in which the list on a page is sorted by pressing the column header you want to sort by.

   Example: To sort the list alphabetically, press the Event Drug column header. To sort the list to show previously selected drugs, press the Entries header. Or, can find the drug by doing a speed search. Refer to "Speed Search" on page 2-17 for more information.

5. Now click the drug item (anywhere except in the check box). The Add Drug Entry dialog box appears (Figure 9-4).

Figure 9-4. Add Drug Entry Dialog Box

6. Enter information about the drug. For details, see Table 9-1 on page 9-4.

7. When you are finished entering drug information, press the OK button.

   The dialog box closes, the information is added to the case record, and the Summary page is updated. The drug information on the Chart grid is also updated.

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Viewing Drug Entries

You can view the drug entries made while the case was recording from two locations in Recorder: the Summary pages of the Pre-Op, Holding, Intra-Op and Post-Op sections, and the Chart grids in the Holding, Intra-Op and Post-Op sections. (Drugs entered before recording starts are displayed on the Pre-Op Summary page. Refer to "Entering Pre-Op Data" on page 6-2.)

Viewing Drug Entries on a Chart Grid

The grid on the Holding, Intra-Op and Post-Op Charts shows all drugs administered according to time of administration. The Pre-Op section does not have a Chart from which you can view drug entries. Instead, see "Viewing Drug Entries on a Summary Page" on page 9-10.

Prerequisite

The case for which you are viewing information must be open.

Procedure

Follow these steps to view drug doses on a Chart grid.

1. Press the Holding, Intra-Op or Post-Op section tab at the bottom of the Recorder screen.

   –Or–
   On the View menu, choose Holding, Intra-Op or Post-Op, then select Chart.

   –Or–
   On the keyboard, press ALT V, P (Holding), ALT V, I or ALT+6 (Intra-Op), or ALT V, T or ALT+7 (Post-Op).

   The section Chart appears. The grid on the Chart is displayed in the upper part of the page (Figure 9-5).

Figure 9-5. Intra-Op Chart Grid—Drug Entries

Rows that contain drug entries are indicated by the symbol ❶. Each row of drug entries designates a unique drug and unit-of-measure combination. Entries for the same drug but different units of measure are in different rows.

Cells within each row show individual doses administered during the time intervals specified in the column headers. If a cell contains a number of dots in parentheses, more than one dose was administered during the specified time period. The number in a cell is the *total* amount of the drug given during the time period; the dots in parentheses indicate the number of doses. A number at the end of a row (in the Total column) indicates the total amount of the drug administered.

2. When you are ready to leave the section Chart, press another page or section tab at the side or bottom of the Recorder screen.

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Viewing Drug Entries on a Summary Page

The Summary pages in the Pre-Op, Holding, Intra-Op, and Post-Op sections contain a list of all drugs recorded, as well as the date and time of administration, unit of measure, dose, administration route, and totals.

Prerequisite

The case for which you are viewing information must be open.

Procedure

Follow these steps to view a list of drug doses on a Summary page.

1. Press the Pre-Op, Holding, Intra-Op or Post-Op tab at the bottom of the Recorder screen, and then press the Summary page tab.

   –Or–
   On the View menu, choose Pre-Op, Holding, Intra-Op or Post-Op, then Summary.

   –Or–
   On the keyboard, press ALT V, P, S (Pre-Op), ALT V, P, S (Holding), ALT V, I, S or ALT+6 (Intra-Op), or ALT V, T, S or ALT+7 (Post-Op).

   The Summary page appears. A list of all items recorded or entered at this workstation, while the case was being recorded, appears (Figure 9-6).
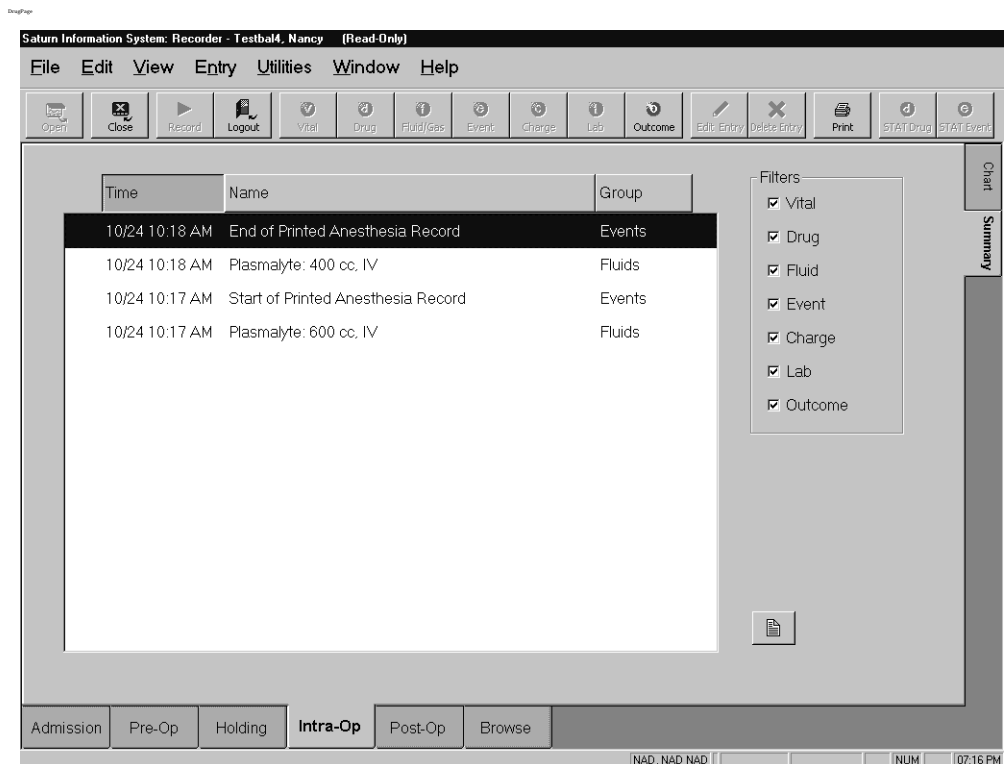
Figure 9-6. Intra-Op Summary Page

2. You can change the order in which the list is sorted by pressing the column header you want to sort by.

   Example: To sort the list alphabetically, press the Name column header. To sort the list chronologically, press the Time column header.

3. To group the drug items together, do one of the following:

- Click or press the Group header. Use the scroll bar to see items hidden from view.

- Or, deselect every category in the Filters area (except for Drug) by clearing the check boxes. Only the drug entries appear in the window.

4. To view more information about a particular drug in the list, double-click it. The item's Drug Entry dialog box appears. When you are done viewing it, press OK or Cancel.

Editing Drug Entries

You can edit drug entries from the Chart grid of the Holding, Intra-Op and Post-Op sections, or on a Summary page of the Pre-Op, Holding, Intra-Op, and Post-Op sections.

Note: To edit STAT drug entries, refer to "Adding Drug Entries STAT" on page 9-7.

Editing Drug Entries on a Chart Grid

You can edit an existing drug dose from its cell in the Holding, Intra-Op, or Post-Op Chart grids. You can also use an empty grid cell to enter a new dose of a drug already existing in the case record. (To access the Chart grids, see "Viewing Drug Entries on a Chart Grid" on page 9-9.)

Prerequisite

The case for which you are editing information must be open.

Procedure

Follow these steps to edit an existing drug dose or add a new drug dose in a cell on the Holding, Intra-Op or Post-Op Chart grid.

Mouse Shortcut: In place of steps 1 and 2, double-click the cell you want to edit and proceed to step 3.

1. Select a cell on a Chart grid to change an existing drug dose or add a new drug dose.

- To edit an existing drug dose, select the cell that contains the entry.

- To enter a new drug dose, select the cell where the drug and time frame for administering the drug intersect. If the cell contains an entry, you must select the New Entry tab when the Drug Entry dialog is displayed.

- To enter a new dose at the current time, select the drug name in the grid.

2. On the toolbar, press the Edit Entry button.

–Or–
On the Edit menu, choose Edit Entry.

The Drug Entry dialog box appears (Figure 9-7) with existing information about the selected drug dose filled in.

Note: The New Entry tab appears in the Drug Entry dialog box when you select the drug name in the grid.

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Figure 9-7. Edit Drug Entry Dialog Box

3. If the dialog box has tabs at the top, press the tab that represents the dose you want to edit.

Note: Tabs appear when the time interval you select on the grid contains entries for more than one dose of the same drug.

4. Enter or change information about the drug dose. For details, see Table 9-1 on page 9-4.

Important: Editing a cell by double-clicking it displays the applicable Drug Entry dialog box with a time already entered. This time is entered in proportion to the part of the cell that is clicked. **Ensure that the automatically-entered time reflects the actual time of the new or modified drug entry.**

5. When you are finished entering information, press the OK button to save it, or press Cancel to start over.

The dialog box closes and the Chart grid is updated with the information you entered. The Summary page is also updated.

Editing Drug Entries on a Summary Page

You can use the Summary page in the Pre-Op, Holding, Intra-Op and Post-Op sections to edit any drug dose on a list.

Prerequisite

The case for which you are editing information must be open, and the Summary page where you want to edit a drug entry must be selected.

Procedure

Follow this procedure to edit a drug dose on a Summary page.

Mouse Shortcut: In place of steps 1 and 2, double-click the cell you want to edit. and proceed to step 3.

1. On a Summary page, select the drug dose you want to edit.

2. On the toolbar, press the Edit Entry button.

    –Or–
    On the Edit menu, choose Edit Entry.

    The Drug Entry dialog box appears (Figure 9-7 on page 9-12) with information about the selected drug dose filled in.

3. Enter or change information as needed. For details, see Table 9-1 on page 9-4.

4. When you are finished entering information, press the OK button to save it, or press Cancel to start over.

    The dialog box closes and the Summary page is updated. The Chart grid is also updated.

Editing STAT Entries on a Summary Page

You can use a Summary page to complete any STAT drug doses on a list.

Prerequisite

The case for which you are editing information must be open.

Procedure

Follow this procedure to complete a STAT drug dose using a Summary page. (To find out how to access the Summary pages, see "Viewing Drug Entries on a Summary Page" on page 9-10.)

Mouse Shortcut: In place of steps 1 and 2, double-click the cell you want to edit and proceed with step 3.

1. On the Summary page of the section where you want to complete one or more STAT drug entries (Figure 9-6 on page 9-10), select the STAT drug dose you want to complete.

2. On the toolbar, press the Edit Entry button.

    –Or–
    On the Edit menu, choose Edit Entry.

    The Add Drug dialog box appears (Figure 9-1 on page 9-2).

3. Beginning with "The Add Drug dialog box appears" in step 1, follow the procedure documented in "Adding Drug Entries" on page 9-2 to complete the STAT drug entry.

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Deleting Drug Entries

You can delete drug entries from a Chart grid in the Holding, Intra-Op and Post-Op sections, or in a Summary page in the Pre-Op, Holding, Intra-Op and Post-Op sections.

Deleting a Single Dose in a Chart Grid

You can delete a drug dose using the Chart grid in the Holding, Intra-Op and Post-Op sections. There is no Chart from which you can delete entries made in the Pre-Op section. Instead, see "Deleting Entries on a Summary Page" on page 9-17.

Prerequisite

The case from which you are deleting information must be open.

Procedure

Follow these steps to delete a drug dose from its cell in a Chart grid:

1. On a Chart grid, select the cell that contains the dose you want to delete.

2. On the toolbar, press the Delete Entry button.

–Or–
On the Edit menu, choose Delete Entry.

A confirmation message appears (Figure 9-8 on page 9-14).
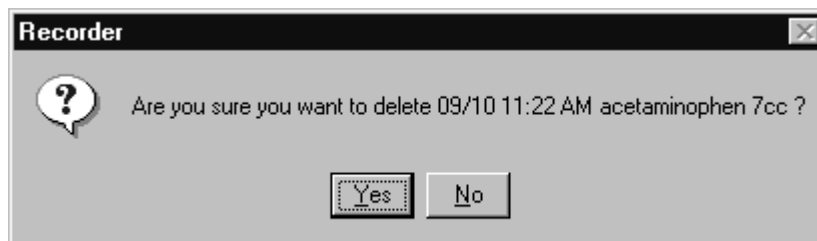
Figure 9-8. Single Dose Delete Dialog Box

3. Press the Yes button to delete the single dose.

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Deleting Multiple Doses in a Cell in the Chart Grid

You can delete multiple drug doses in a Chart grid in the Holding, Intra-Op and Post-Op sections. There is no Chart from which you can delete entries made in the Pre-Op section. Instead, see "Deleting Entries on a Summary Page" on page 9-17.

Prerequisite

The case from which you are deleting information must be open.

Procedure

Follow these steps to delete one or more drug doses from a cell in a Chart grid:

1. On the Chart grid in the section where you want to delete one or several drug doses (Figure 9-6 on page 9-10), select the cell that contains the doses you want to delete.

2. On the toolbar, press the Delete Entry button.

    –Or–
    On the Edit menu, choose Delete Entry.

    A dialog box containing a checklist of the doses in that cell appears (Figure 9-9).
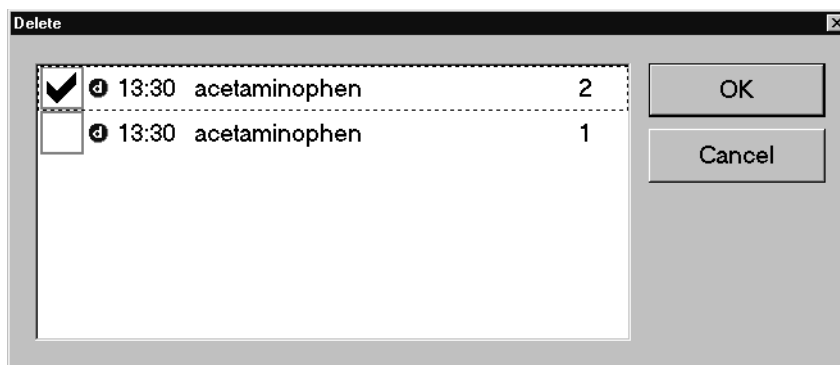
Figure 9-9. Multiple Dose Delete Dialog Box

3. Select the check boxes of the entries you want to delete and then press the OK button to delete them.

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Deleting All Doses in a Row of a Chart Grid

You can delete an entire row of drug doses on a Chart grid in the Holding, Intra-Op and Post-Op sections.

Prerequisite

The case from which you are deleting information must be open.

Procedure

Follow these steps to delete an entire row of doses from a Chart grid:

1. On the Chart grid, select the first cell in the row that you want to delete, which contains the name of the drug for which doses have been recorded in that entire row.

2. On the toolbar, press the Delete Entry button.

   –Or–
   On the Edit menu, choose Delete Entry.

   A confirmation message appears (Figure 9-10).
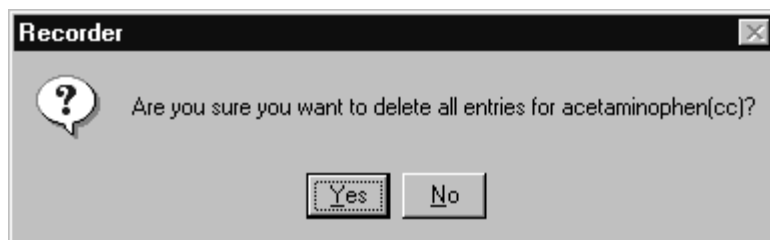
Figure 9-10. Row of Doses Delete Dialog Box

3. Press the Yes button to delete the row of doses.

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Deleting Entries on a Summary Page

You can delete a drug entry on the Summary pages of the Pre-Op, Holding, Intra-Op and Post-Op sections.

Prerequisite

The case from which you are deleting information must be open.

Procedure

Follow this procedure to delete a drug dose on a Summary page. To access the Summary pages, see "Viewing Drug Entries on a Summary Page" on page 9-10.

1. On a Summary page, select the drug dose you want to delete.

2. On the toolbar, press the Delete Entry button.

   –Or–
   On the Edit menu, choose Delete Entry.

   A confirmation message appears (Figure 9-11).
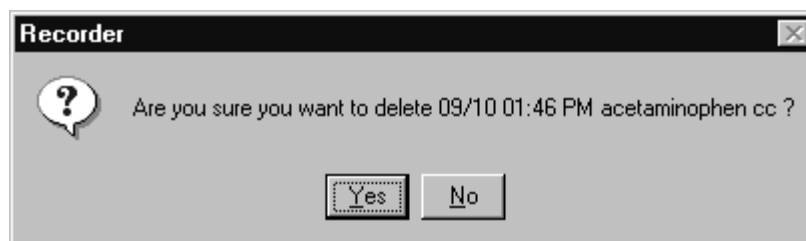
Figure 9-11. Intra-Op Drugs Summary Delete Dialog Box

3. Press the Yes button to delete the drug entry.

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Using the Drug Dosage Rate Calculator

You can use the Drug Dosage Rate Calculator to calculate the value of any one of the boxes based on the value entered in the other boxes. For example, you could calculate a drug dose unit per weight per time rate (ug/k/min).

Prerequisites   The following prerequisites apply to this function:

- The Drug Dosage Rate Calculator can be accessed from either Recorder's Utilities menu or from Recorder's Drug Entry dialog box.

- The unit selection lists (bag quantity, drug quantity, and delivery rates) in the Drug Dosage Rate Calculator (see Table 9-3) are dependent on the Drug Units site list, which is configured using the List Manager application.

Table 9-3. Unit Types Selected in the Drug Dosage Rate Calculator

Calculator Box	Type of Units
Quantity of bag	Bag quantities are assigned volume type units (ml, l, cc, etc.)
Quantity of drug	Drug quantities are assigned weight type units (mg, ug, gm, etc.)
Delivery rate	Delivery rates are assigned rate type units (mg/min, ml/min, etc.)

Procedure   Follow these steps to launch the Drug Dosage Rate Calculator.

1. On the Utilities menu, choose Drug Dosage Rate Calculator.

   –Or–
   In the Add Drug Entry dialog box, press the Dosage Calc button (Figure 9-2 on page 9-3).

   The Drug Dosage Rate Calculator appears (Figure 9-12).

Figure 9-12. Drug Dosage Rate Calculator

2. Complete the boxes in the Drug Dosage Rate Calculator (described in Table 9-4) and press the Calculate button to generate the drug dosage rate.

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3. Select the Done button or the Close button (**x**) in the top right corner of the Drug Dosage Rate Calculator to close the calculator window.

The following table describes the boxes in the Drug Dosage Rate Calculator.

Table 9-4. Drug Dosage Calculator Box Descriptions

Option	Description
Quantity of bag	The quantity of fluid in the bag (i.e., **250** ml of 5% dextrose). Use the number pad buttons or the keyboard to enter this value. *Default:* None
Units of the bag quantity	The available volume units, which you select from the drop-down list. *Default:* L
Quantity of drug	The quantity of the drug placed into the bag of fluid (i.e., **55** mg of dopamine). Use the number pad buttons or the keyboard to enter this value. *Default:* None
Units of the drug quantity	The unit of measure for the drug, which you select from the drop-down list. *Default:* gm
Patient Weight	The patient's weight in kilograms. Use the number pad buttons or the keyboard to enter this value. *Default:* None
Delivery Rate	The rate at which the bag of fluid is being delivered. Use the number pad buttons or the keyboard to enter this value. *Default:* None
Units of the delivery rate	The unit of measure for the delivery rate, which you select from the drop-down list. *Default:* L/hr
Dosage	This is where the dosage appears after you enter information in each of the other boxes and press the Calculate button. *Default:* None
Number Pads	An alternative means, other than the keyboard, for you to enter data into the calculator boxes. • Pads 0 through 9 enter numeric values. • The C pad clears the entire entry. • The "." pad enters a decimal point. *Default:* None

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Table 9-4. Drug Dosage Calculator Box Descriptions (continued)

Option	Description
Calculate Button	Calculates the value of a blank entry box based on values entered in other boxes. The calculation algorithm uses the data that you enter using the keypad/keyboard and the drop-down lists. *Example:* • Dosage = (((Drug Quantity/Bag Quantity) x Delivery Rate) x 1000000) /60/Patient Weight • Patient Weight = ((((Drug Quantity/Bag Quantity) x Delivery Rate) x 1000000) /60)/Dosage • Drug Quantity = (((((60 x Patient Weight x Dosage) / 1000000) /Delivery Rate) x Bag Quantity) x Delivery Rate Unit Conversion Factor) x Drug Quantity Unit Conversion Factor • Bag Quantity = (Drug Quantity/(((60 x Patient Weight x Dosage) /1000000) /Delivery Rate)) x Bag Quantity Unit Conversion Factor • Delivery Rate = (((60 x Patient Weight x Dosage) /1000000 x (Bag Quantity/Drug Quantity)) /Delivery Rate Conversion Hour (where Delivery Rate Conversion Hour = 60 if unit is per minute; otherwise Delivery Rate Conversion Hour = 1) *Default:* None
Done Button	Closes the Drug Dosage Rate Calculator. *Default:* None
The Close Button (**x** in the top-right corner of the Drug Dosage Rate Calculator)	Known as the Close button in Windows applications, selecting the x in the top right corner of the Drug Dosage Rate Calculator removes the calculator from the screen. *Default:* None

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Adding and Modifying Event Entries

This section explains how to add, view, update, and delete event information. It also explains the rules used by which Recorder "frames" records using events.

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Selecting the Event Bar

The Event Bar option must be selected for the Event bar to appear in the graphics area of a Chart.

Prerequisite   The case in which you want to view event information must be open.

Procedure   Follow these steps to display the Event bar in a Chart.

1. Select the Case View Settings option on the View menu. The Case view Settings dialog box appears (Figure 10-2).
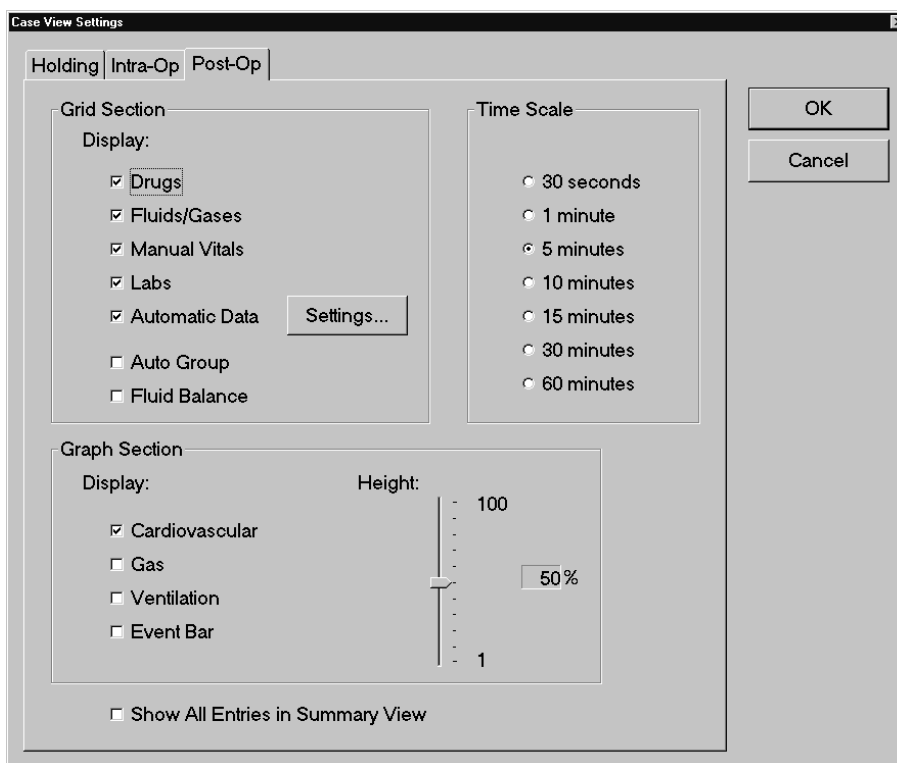
Figure 10-1. Case View Settings Dialog Box

2. Select a tab at the top of the Case View Settings dialog box (Holding, Intra-Op or Post-Op).

3. In the Graph Section, select the Event Bar check box.

4. Repeat steps 2 and 3 to select the Event bar for the other sections, as needed.

5. Press the OK button when you are finished. The Event bar appears in the graphics area of the section Chart(s) you selected (Figure 10-2 on page 10-3).

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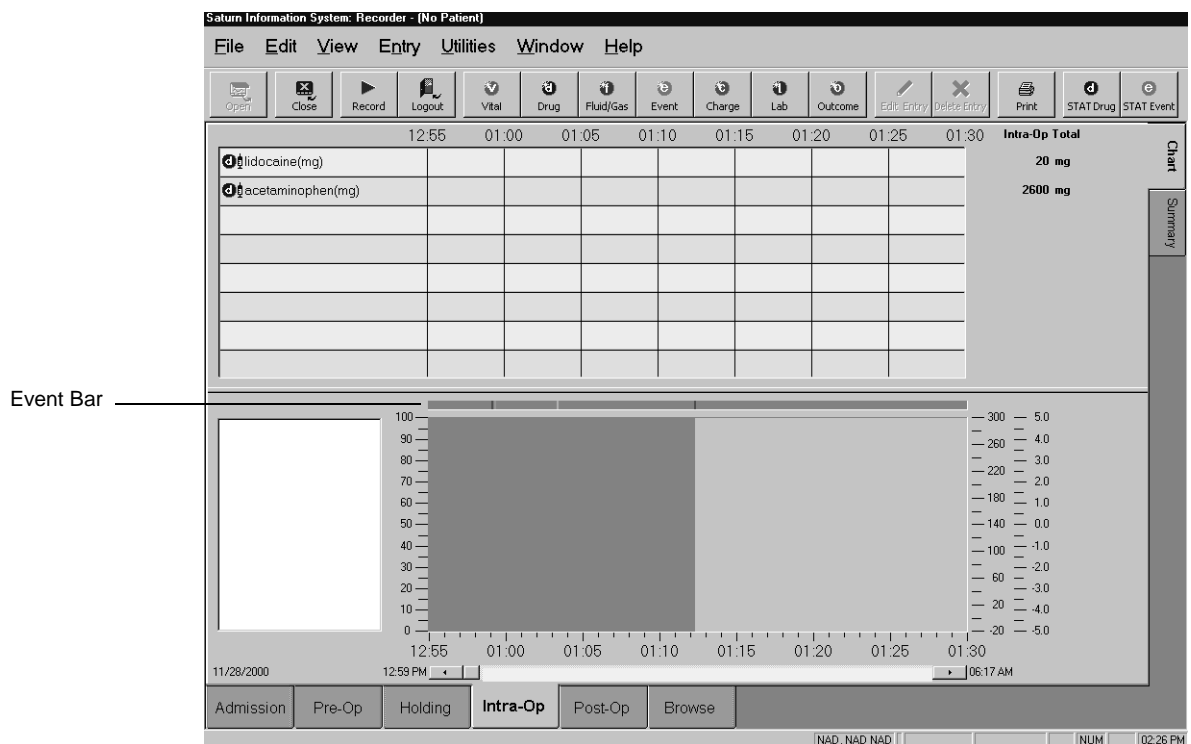
Figure 10-2. Selecting the Event Bar

10 Adding and Modifying Event Entries

Adding Event Entries

You can enter information about events that occur during a case from anywhere in Recorder. If you want the event entries to be part of the record, the case must be recording. Event entries that you add before you start recording show up on the Pre-Op Summary page. Refer to "Entering Pre-Op Data" on page 6-2.

Note: If a Start of Anesthesia Care event is not entered before you enter a drug, fluid/gas, or manual vital, a Start of Anesthesia Care event is automatically entered into the case.

Prerequisite   The case for which you are entering information must be open and recording (the Record button must be selected).

Procedure   Follow these steps to add an entry about an event. You can perform this procedure from anywhere in Recorder.

1. On the toolbar, press the Event button.

   –Or–
   On the Entry menu, choose Events.

   –Or–
   On the keyboard, press F7.

   –Or–
   On the Event bar on the section Chart, double-click at the time location for which you want to add an event.

   Note: The Event bar option must be selected for the Event bar to appear in the graph area of the screen. Refer to "Selecting the Event Bar" on page 10-2.

   The Add Event dialog box appears (Figure 10-3).
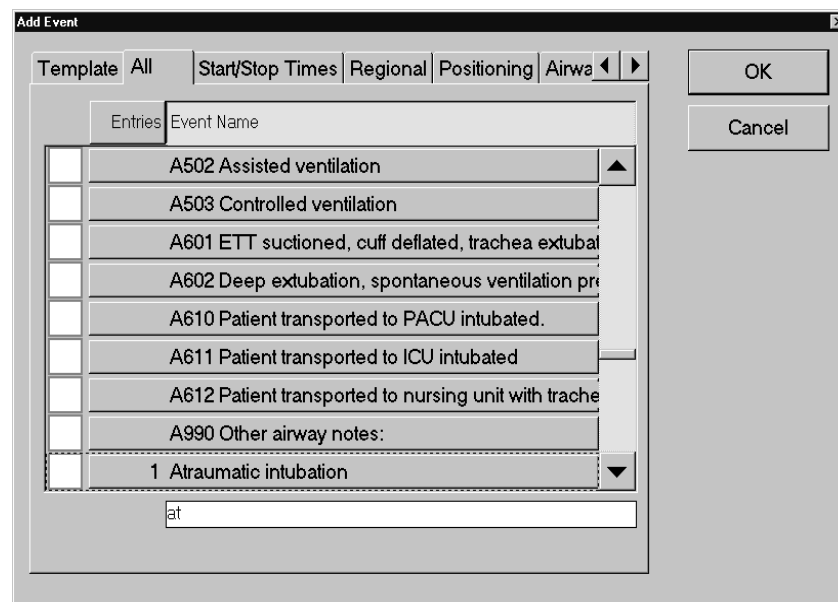
Figure 10-3. Add Event Dialog Box

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Adding and Modifying Event Entries | **10**

The default page is *Template*, which contains a list of all of the events that are available to you if you loaded an environment when you opened or created the case. The *All* page lists all events which are available to you. Other pages (i.e., Start/Stop Times, Regional, etc.) appear after the *All* page if you created these pages using the List Manager application.

These other pages can contain lists of events from which you can: add an event to the case, select an event to update its date and time, enter a comment about the event, or complete a STAT event.

2. Select a page tab. You can change the order in which the list is sorted by pressing the column header you want to sort by.

   Example: To sort the list alphabetically by event name, press the Event Name column header. To sort the list to show which events have already been selected, press the Entries header.

3. Select one or more event item check boxes and press the OK button. The event item(s) are placed on the Summary page of the Holding, Intra-Op or Post-Op sections for you to complete now or later.

   Note: The Electronic Signature dialog box may appear when adding an event. Refer to "Electronic Signatures" on page 2-34 to enter a required signature.

4. Do one of the following:

   • On the Summary page, double-click an item you just entered. The Edit Entry dialog box appears (Figure 10-4).

   • Or, double-click the STAT Event item. The Add Entry dialog box appears (Figure 10-4).

Figure 10-4. Add Event Entry Dialog Box

5. Enter information about the event. For details, see Table 10-1 on page 10-6.

6. When you are finished entering event information, press the OK button.

   Note: When you enter or change data, you may be required to enter your password. If the Enter Password dialog box appears, refer to "Password Restricted Data" on page 2-39.

   The dialog box closes, the information is added to the case record, and the Summary page is updated. In addition, an event marker is placed on the

Event bar. A "paper" icon appears next to the item if you added a remark (refer to the "Attachment Buttons" on page 2-33).

Note: If you forgot to press the Record button as soon as the patient was connected to the monitors, Recorder lets you "roll back" the start record time up to one hour to include the automatic data held in the buffer that belongs in the case. Refer to "Changing the Start Record Time (Rollback)" on page 4-17 for details.

The following table describes the options in the Add Event Entry dialog box.

Table 10-1. Add Event Entry Dialog Box Options

Option	Description
Time	The time the event occurred in *hh:mm* format. Leading zeros are not required. You can select the hours and minutes with the arrows, or enter them from the keyboard.
	Your system administrator determines whether your system will display 12- or 24-hour time. Valid values for 12-hour time are: 1 to 12 (hours) 0 to 59 (minutes). When 12-hour time is used, you must also select the AM or PM option button. Valid values for 24-hour time are: 1 to 24 (hours) and 0 to 59 (minutes). When 24-hour time is used, AM and PM option buttons do not appear.
	Examples: 12:00 AM for midnight (12-hour time) 12:00 PM for noon (12-hour time) 24:00 for midnight (24-hour time) 12:00 for noon (24-hour time) *Default:* For new event entries, the current time. For previous event entries, the last time entered.
Date	The date the event occurred in *M/d/yyyy* or *yyyy.M.d* format, depending on the way in which your system administrator sets up your system. Leading zeros are not required. You can select the date from a drop-down calendar or enter it from the keyboard.
	Default: For new event entries, the current date. For previous event entries, the last date entered.
Remarks	Any comment you want to enter about the event (up to 2,048 characters). A "paper" icon appears next to the item if a remark has been entered. Refer to "Attachment Buttons" on page 2-33 for details.
	Default: None
OK Button	Press the OK button when you wish to save to the case record the new or changed information you just entered.
Cancel Button	Press the Cancel button when you wish to exit the dialog box after viewing the information, or when you do not wish to save the information you just changed or entered.

Adding Event Entries STAT

A STAT event entry can be entered at any time, and a case does not need to be open or recording when you add it. For example, if you are in an emergency situation, you can use the STAT Event function to mark the date and time of an event. If no case is open, the STAT Event will be added to the next case opened, whether it's a new or existing case. When you have more time, you can update these entries with information about the drug dose administered to the patient.

Important: The STAT entries you make will be included in the next case opened at this workstation. Therefore, it is recommended that you open the patient's case if one already exists, or create the case by entering the patient's name or the data required to establish a new case (i.e., medical record number, etc.) as soon as possible. You can fill out the remaining boxes in the case later. Otherwise, you risk the chance that the STAT entries will be included in another patient's case.

Procedure   Follow these steps to add STAT event entries.

Note: If you already pressed the STAT Event button and are now ready to fill in the event information, skip the first step.

1. From the toolbar, press the STAT Event button.

    –Or–
    On the Entry menu, choose STAT Event.

    –Or–
    On the keyboard, press F12.

    The date and time you actually press the STAT Event button are recorded as the date and time the event occurred.

    Note: When you have time, come back and finish the remaining steps in this procedure.

2. On the Summary page, select the STAT EVENT you want to complete.

    Note: A STAT Event entry appears on a Summary page when you select the Show All Entries in Summary View check box from the Case View Settings option on the View menu. It also appears if a the STAT Drug button was pressed within the Start and End Record times for the selected Workstation Type.

3. On the toolbar, press the Edit Entry button.

    –Or–
    On the Edit menu, choose Edit Entry.

    The Add Event dialog box appears (Figure 10-3 on page 10-4).

4. Select a page tab (i.e., All, Start/Stop Times, Regional, etc.). You can change the order in which the list on a page is sorted (except for Template) by pressing the column header you want to sort by.

    Example: To sort the list alphabetically by event name, press the Event Name column header. To sort the list to show previously selected events, press the

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Entries header. Or, find the event by doing a speed search. Refer to "Speed Search" on page 2-17 for more information.

5. Select one or more event item check boxes. All items you check will be entered the same time as the STAT event.

6. Now click the event item (anywhere except in the check box). The Add Event Entry dialog box appears (Figure 10-5).
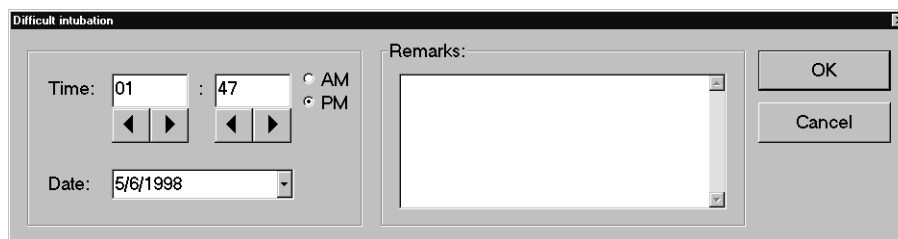
Figure 10-5. Add Event Entry Dialog Box (STAT)

7. Enter information about the event. For details, see Table 10-1 on page 10-6.

8. When you are finished entering event information, press the OK button.

The dialog box closes, the information is added to the case record, and the Summary page is updated. In addition, an event marker is placed on the Event bar.

A "paper" icon appears next to the item if you added a Remark (refer to the "Attachment Buttons" on page 2-33 for more information).

Viewing Event Entries

You can view event information from two locations in Recorder: on the Event bar in the graphics area of a Holding, Intra-Op or Post-Op Chart, and on the Summary pages of the Pre-Op, Holding, Intra-Op and Post-Op sections.

Viewing Events on the Event Bar   The Event bar in the graphics area is a time line that displays a color coded marker for each milestone event (start/stop times, the time of intubation, change in patient position, etc.) that you manually enter into the system during the case. Refer to "Selecting the Event Bar" on page 10-2 for more information.

Prerequisite   The case for which you are viewing information must be open, and the Event bar must be selected.

Procedure   Follow these steps to see event markers on the Event bar.

1. Press the Holding, Intra-Op or Post-Op tab at the bottom of the Recorder screen.

   –Or–
   On the View menu, choose Holding, Intra-Op, or Post-Op.

   –Or–
   On the keyboard, press ALT V, P (Holding), ALT V, I or ALT+6 (Intra-Op), or ALT V, T or ALT+7 (Post-Op).

   The section's Chart appears. The Event bar is displayed directly below the splitter bar that separates the grid and graphics areas of the page (Figure 10-6 on page 10-10).

   Note: If the Event bar is not displayed, see "Selecting the Event Bar" on page 10-2.
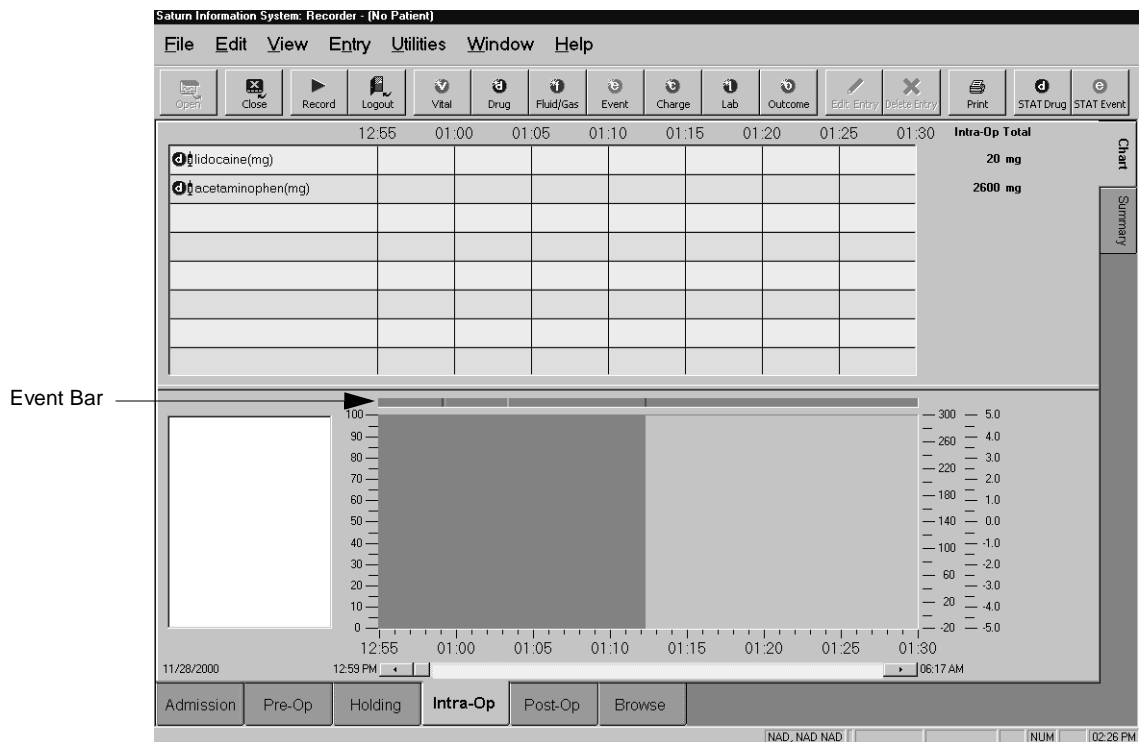
Figure 10-6. Intra-Op Event Bar

Each marker on the Event bar represents an event. The event markers are color coded by event category.

Event Category	Color Code
Start/Stop Times	Red
Airway	Light Yellow
Patient Position	Light Green
Artifact	White
Template, Miscellaneous	Light Cyan

2. To interpret the nature of an event, examine the color and position of its marker.

    Example: Two red event markers at the beginning of the case normally indicate the Start of Anesthesia and Start of Surgery events.

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Viewing Events on a Summary Page

The Summary pages in the Pre-Op, Holding, Intra-Op, and Post-Op sections contain lists of all events that have occurred, as well as the date and time of each occurrence.

Prerequisite

The case for which you are viewing information must be open.

Procedure

Follow these steps to view a list of events on a Summary page.

1. Press the Holding, Intra-Op or Post-Op tab at the bottom of the Recorder Screen, then press the Summary page tab.

   –Or–
   On the View menu, choose Holding, Intra-Op or Post-Op, then Summary.

   –Or–
   On the keyboard, press ALT V, P, S (Holding), ALT V, I, S (Intra-Op), or ALT V, T, S (Post-Op).

   The Summary page appears for the section where you want to view event information (Figure 10-7).
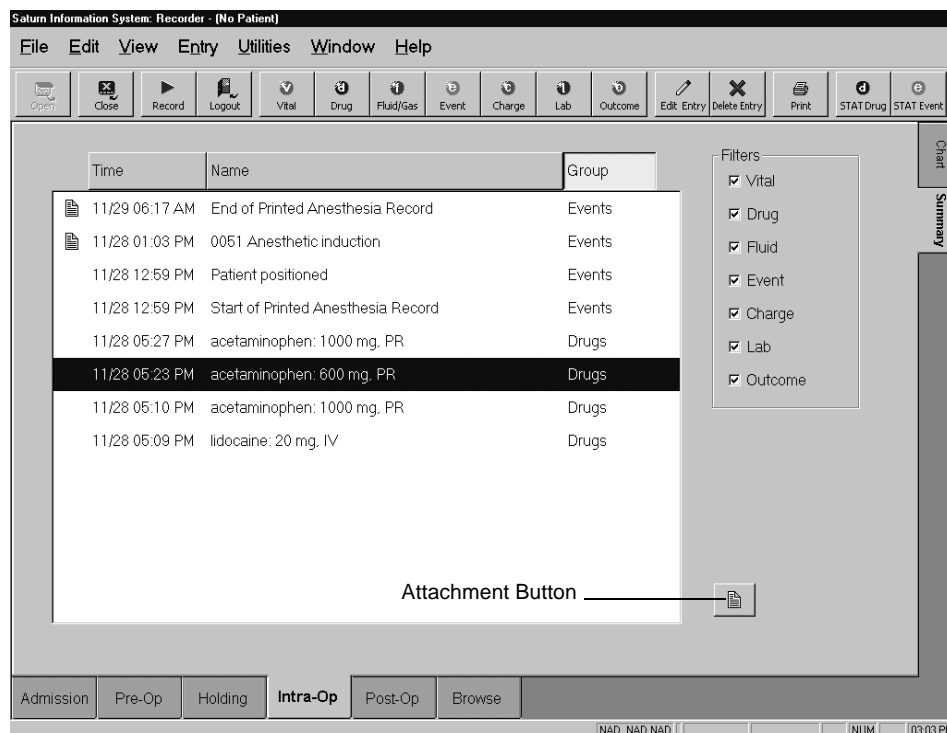
Figure 10-7. Intra-Op Summary Page

2. You can change the order in which the list is sorted by pressing the column header you want to sort by.

   Example: To sort the list alphabetically, press the Name column header. To sort the list chronologically, press the Time column header.

3. To group the event items together, do one of the following:

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- Click or press the Group header. Use the scroll bars to view items hidden from view.
- Or, deselect every category in the Filters area (except for Event) by clearing the check boxes. Only the event entries appear in the window.

4. To view more information about a particular event in the list, double-click it. The item's dialog box appears. When you are done viewing it, press OK or Cancel.

5. To view an attachment, press the Attachment button (Figure 10-7 on page 10-11). The remarks are displayed. Click the Attachment button again to hide the remarks from view.

6. When you are finished viewing event information, select another tab at the side or bottom of the screen.

Editing Event Entries

You can edit event entries on the Summary pages in the Pre-Op, Holding, Intra-Op and Post-Op sections.

Note: To edit STAT event entries, refer to "Adding Event Entries STAT" on page 10-7.

Prerequisite   The case for which you are editing information must be open.

Procedure   Follow this procedure to edit an event entry using the Summary pages. (To access the Summary pages, see "Viewing Events on a Summary Page" on page 10-11.)

Mouse Shortcut: In place of steps 1 and 2, you can double-click the event entry list item on the Summary page that you want to edit, and then proceed to step 3.

1. On a Summary page, select the event you want to edit.

2. On the toolbar, press the Edit Entry button.

   –Or–
   On the Edit menu, choose Edit Entry.

   The item's Edit Entry dialog box appears (Figure 10-8) with information about the selected event.
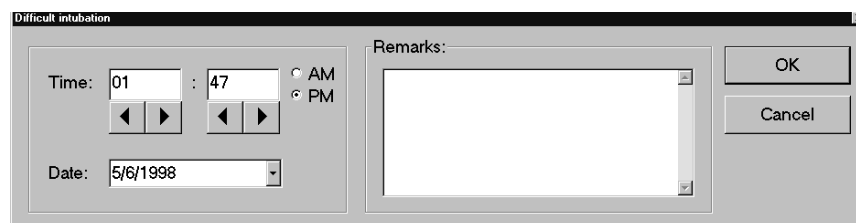
Figure 10-8. Edit Event Entry Dialog Box (Event)

3. Enter or change information as needed. For details, see Table 10-1 on page 10-6.

4. When you are finished entering information, press the OK button to save it, or press Cancel to start over.

   The dialog box closes and the Summary is updated. Where applicable, the Event bar is also updated.

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Deleting Event Entries

You can delete event entries on the Summary pages in the Pre-Op, Holding, Intra-Op and Post-Op sections.

Prerequisite   The case from which you are deleting information must be open.

Procedure   Follow these steps to delete an event on a Summary page. (To access the Summary pages, see "Viewing Events on a Summary Page" on page 10-11.)

1. On the Summary page where you want to delete an event, select the event you want to delete.

2. Press the Delete Entry button on the toolbar.

   –Or–
   On the Edit menu, choose Delete Entry.

   A confirmation message appears (Figure 10-9).
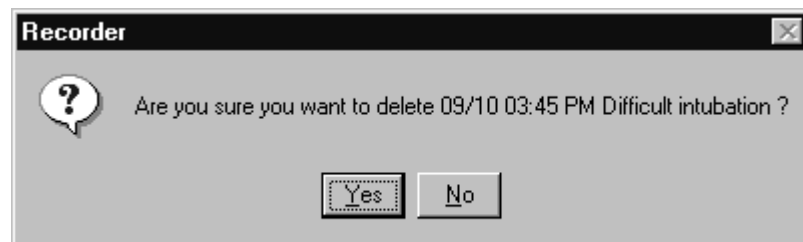
Figure 10-9. Summary Page Delete Dialog Box

3. Press the Yes button to delete the event.

   The event is deleted from the case record, the Summary page, and from the Event bar on that section's Chart page.

Rules for Framing Records Using Events

The following Start/Stop Time event rules are used to frame records in Recorder.

Printed Anesthesia Record Event

The 'Start of Printed Anesthesia Record' event is automatically added to a case when Record is selected on a workstation configured as an Intra-Op workstation type. The 'End of Printed Anesthesia Record' event is automatically added to a case when Record is selected again.

Printed Holding Record Event

The 'Start of Printed Holding Record' event is automatically added to a case when Record is selected on a workstation configured as a Holding workstation type. The 'End of Printed Holding Record' event is automatically added to a case when Record is selected again.

Printed Post-Op Record Event

The 'Start of Printed Post-Op Record' event is automatically added to a case when Record is selected on a workstation configured as a Post-Op workstation type. The 'End of Printed Post-Op Record' event is automatically added to a case when Record is selected again.

Holding Grid and Graph and Printed Holding Record

The grid and graph in the Holding section of Recorder and the printed Holding record will displays data (the times of which fall within the range from 'Start of Printed Holding Record' time to 'End of Printed Holding Record' time) if it exists, or the current time if it does not exist. If the 'Start of Printed Holding Record' event does not exist, nothing is displayed.

Intra-Op Grid and Graph and Printed Anesthesia Record

The grid and graph in the Intra-Op section of Recorder and the printed anesthesia record will display data (the times of which fall within the range from 'Start of Printed Anesthesia Record' time to 'End of Printed Anesthesia Record' time) if it exists, or the current time if it does not exist. If the 'Start of Printed Anesthesia Record' event does not exist, nothing is displayed.

Post-Op Grid and Graph and Printed Post-Op Record

The grid and graph in the Post-Op section of Recorder and the printed Post-Op record displays data (the times of which fall within the range from 'Start of Printed Post-Op Record' time to 'End of Printed Post-Op Record' time) if it exists, or the current time if it does not exist. If the 'Start of Printed Post-Op Record' does not exist, nothing is displayed.

Grid Totals for Holding, Intra-Op and Post-Op Sections and Printed Holding Anesthesia and Post-Op Records

The totals on the grid for the Holding, Intra-Op and Post-Op sections of Recorder, and the printed Holding anesthesia and Post-Op records display the total only from the first entry to the end time of the grid and graph as established by the rules described in this section.

Printed Holding Record

The 'Start of Printed Holding Record' and 'End of Printed Holding Record' events are not displayed on the printed holding record.

Printed Anesthesia Record

The 'Start of Printed Anesthesia Record' and 'End of Printed Anesthesia Record' events are not displayed on the printed anesthesia record.

Printed Post-Op Record

The 'Start of Printed Post-Op Record' and 'End of Printed Post-Op Record' events are not displayed on the printed Post-Op record.

10 Adding and Modifying Event Entries

Recorder User's Guide

11

Adding and Modifying Fluid/Gas Entries

This section explains how to add, view, update, and delete information about the fluids and gases that you administer.

11 | Adding and Modifying Fluid/Gas Entries

Adding Fluid/Gas Entries

You can enter fluid/gas information in a case from anywhere in Recorder.

Note: If you want the fluid/gas entries to be part of the record, the case must be recording. Fluid/gas entries that you add before you start recording the case show up on the Summary page of the Pre-Op section. Refer to "Entering Pre-Op Data" on page 6-2.

Prerequisite   The case for which you are entering information must be open and recording.

Procedure   Follow these steps to add an entry about patient fluids/gases.

1. On the toolbar, press the Fluid/Gas button.

   –Or–
   On the Entry menu, choose Fluids/Gases.

   –Or–
   On the keyboard, press F6.

   The Add Fluid/Gas Selection dialog box appears (Figure 11-1). It contains one or more pages. Each page contains a list of fluids/gases from which you can select to add an entry on the measurement of that fluid/gas.

   The default page is *Template*, which contains a list of all of the fluids/gases that are available to you if you loaded an environment when you opened or created the case. The *All* page lists all fluids/gases that are available to you. Other pages you created using the List Manager application may appear after the *All* page. These other pages (i.e., Fluid out, Fluid In, etc.) can contain lists of fluids/gases that fall into categories that you choose and create.
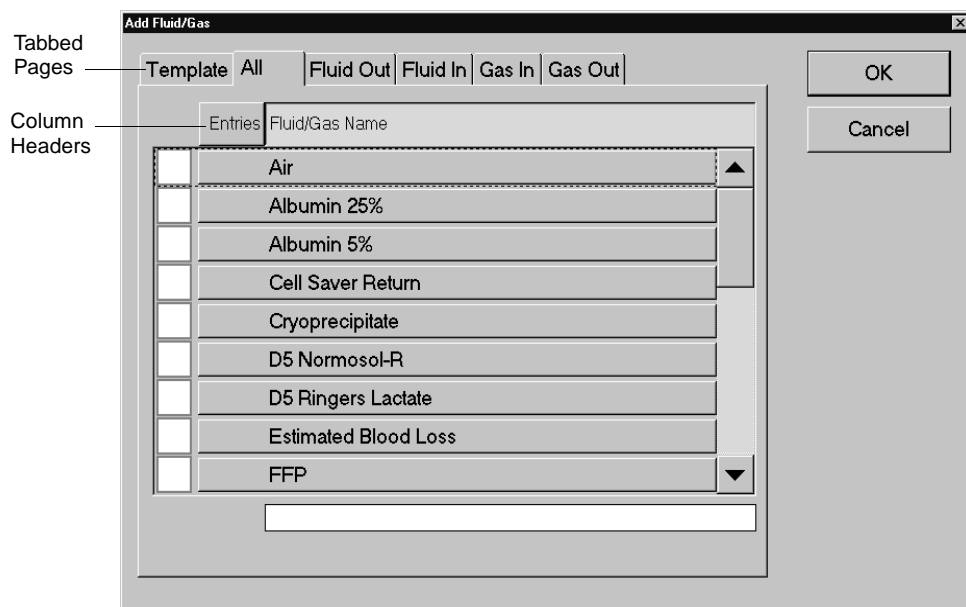
Figure 11-1. Add Fluid/Gas Selection Dialog Box

2. Select a page tab. A list usually appears for each page. You can change the order in which the list is sorted by pressing a different column header.

   Example: To sort the list alphabetically by fluid/gas name, press the Fluid/Gas Name column header. To sort the list to show which fluids/gases have already been selected, press the Entries header.

3. Select one or more fluid/gas item check boxes and press the OK button. The fluid/gas item(s) are placed on the Summary page of the Pre-Op, Holding, Intra-Op or Post-Op section where you want to add fluids/gases.

4. Do one of the following:

   - Select the fluid/gas item on the Chart page and then press the Edit Entry button on the toolbar.

   - Double-click the fluid/gas item on the grid section of the Chart page.

     The Add Fluid/Gas Entry dialog box appears (Figure 11-2).

Figure 11-2. Add Fluid/Gas Entry Dialog Box

5. Enter information about the fluid/gas measurement. For details see Table 11-1 on page 11-4 and "Using the Drug Dosage Rate Calculator" on page 9-18.

   Note: Tabbed pages appear in the Add Fluid/Gas Entry dialog box if you recorded a measurement for this fluid/gas earlier in the case. For example, tabs at the top of the pages will display the earlier entry times (i.e., 15:12 - ml in Figure 11-2), plus a New Entry page.

   Use the keyboard to type important notes and information in the Remarks text box. A triangle icon appears in the upper right corner of a grid cell when you add remarks to a fluid/gas entry.

11 | Adding and Modifying Fluid/Gas Entries

6. When you are finished entering information, press the OK button.

Note: When you enter or change data, you may be required to enter your password. If the Enter Password dialog box appears, refer to "Password Restricted Data" on page 2-39.

The dialog box closes and the information is added to the case record. The information is also added to the Summary page, as discussed throughout this section.

Shortcut: If you are recording a fluid/gas measurement that you have already entered into the case record, you may be able to use the Edit Entry button to enter the new measurement. (See "Editing Fluid/Gas Entries on a Chart Grid" on page 11-9.) Using the Edit Entry button is usually quicker because Recorder automatically fills in some of the information for you on the New Entry page. However, if you are entering a specific fluid/gas into the case record for the first time, you must use the Fluid/Gas button.

The following table describes the options in the Fluid/Gas Entry dialog box.

Table 11-1. Add Fluid/Gas Entry Dialog Box Options

Option	Description
Bag	Bag number, enabled for Ascending or Descending total types.
Totaling	The method of totaling when cumulative amounts of the fluid/ gas are recorded. Choices include: None, Manual, Auto, Last Entry, Ascending, Descending The totaling method that you select is applied to all of the fluid/ gas entries. *Default:* Selected through List Manager
Time	The time of fluid/gas administration in *hh:mm* format. Leading zeros are not required. You can select the hours and minutes with the arrows or enter them from the keyboard. Your system administrator determines whether your system will display 12- or 24-hour time. Valid values for 12-hour time are: 1 to 12 (hours) and 0 to 59 (minutes). When 12-hour time is used, you must also select the AM or PM option button. Valid values for 24-hour time are: hours are from 1 to 24, and minutes are from 0 to 59. When 24-hour time is used, AM and PM option buttons do not appear. *Examples:* 12:00 AM for midnight (12-hour time) 12:00 PM for noon (12-hour time) 24:00 for midnight (24-hour time) 12:00 for noon (24-hour time) *Default:* For new fluid/gas entries, the current time. For previous fluid/gas entries, the last time entered.

Table 11-1. Add Fluid/Gas Entry Dialog Box Options (continued)

Option	Description
Date	The date of fluid/gas administration in *M/d/yyyy, yyyy.M.d*, or any other format in which your system administrator sets up your system. Leading zeros are not required. You can select the date from a drop-down calendar or enter it from the keyboard. *Default:* For new fluid/gas entries, the current date. For previous fluid/gas entries, the last date entered.
Unit	The unit of measure for the fluid/gas. You can change the default value by selecting another unit from the list box. *Default:* None, or a site-specific default set by your system administrator using the List Manager program.
Route	The route used to administer the fluid/gas. *Default:* None, or a site-specific default set by your system administrator.
Serial #	The serial number of the fluid or gas. *Default:* None
Rate	The fluid/gas volume. You enter the volume from the keyboard or select it from the keypad. Preconfigured volumes may be assigned to some of the keypad keys, enabling you to make quick and accurate selections. *Default:* None
Remarks	Type important remarks here (up to 2,048 characters). A triangle icon appears in the upper right corner of a grid cell when remarks are entered in this dialog box.
OK Button	Press the OK button when you are finished making changes. Any information you entered is saved to the program.
Cancel Button	Press the Cancel button when you want to escape the dialog box without saving any of the changes you just made, or when you simply are viewing the data and do not want to make changes.
Stop Fluid Check Box	This check box enables you to record the stop of fluid entries. Check the box to set the rate to zero when the infusion is completed. *Note:* This check box is enabled for fluid/gases with ascending and descending total types only. *Default:* Not checked

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Table 11-1. Add Fluid/Gas Entry Dialog Box Options (continued)

Option	Description
Dosage Calc Button	Selecting this button opens the Drug Dosage Rate Calculator, which calculates a dose unit per weight per time rate (ug/k/min) using data that you enter into the Calculator. See Table 9-4 on page 9-19 for more details. *Default:* None

Viewing Fluid/Gas Entries

You can view fluid/gas entries from two locations in Recorder: on a Chart grid in the Holding, Intra-Op and Post-Op sections, and the Summary pages in the Pre-Op, Holding, Intra-Op and Post-Op sections. (Fluid/Gas entries that are entered before recording starts are displayed on the Summary page of the Pre-Op section. Refer to "Entering Pre-Op Data" on page 6-2.)

Viewing Fluid/Gas Entries on a Chart Grid

The grid on the Holding, Intra-Op, and Post-Op Chart shows all fluids and gases according to the times they were dispensed.

Prerequisite

The case for which you are viewing information must be open.

Procedure

Follow these steps to view fluid/gas volumes on a Chart grid.

1. Press the Holding, Intra-Op or Post-Op section tab at the bottom of the Recorder screen.

   –Or–
   On the View menu, choose Holding, Intra-Op, or Post-Op, and then select Chart.

   –Or–
   On the keyboard, press ALT V, P (Holding), ALT V, I or ALT+6 (Intra-Op), or ALT V, T or ALT+7 (Post-Op).

   The section Chart appears. The grid is displayed in the upper part of the Chart (Figure 11-3).

Figure 11-3. Intra-Op Chart Grid (Fluids/Gases)

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Rows that contain fluid/gas entries are indicated by the symbol ❶. Each row of fluid/gas entries designates a unique fluid/gas and unit-of-measure combination.

Important: Cells within each row show individual measurements recorded during the time interval specified in the column headers. If a cell contains a number of dots in parentheses, more than one measurement was recorded during the specified time period. The number is the *total* amount of the fluid/gas given during the time period; the dots in parentheses indicate the number of measurements. Additionally, if more than one bag is being used at a time, a number in brackets will be displayed before the measurement number. If "ascending" or "descending" is selected for the Totaling method, the amount displayed is the amount of the latest entry.

2. Double-click a cell to view all the entries made during that time interval.

   Tabbed pages appear in the Add Drug Entry dialog box if you recorded a dose for this fluid/gas earlier in the case. For example, tabs at the top of the pages will display the earlier times, plus a New Entry page.

3. When you are ready to leave the Chart page, press another section or page tab.

Viewing Fluid/ Gas Entries on a Summary Page

The Summary pages in the Pre-Op, Holding, Intra-Op and Post-Op sections contain lists of all fluids/gases recorded, as well as the date and time of recording, unit of measure, amount, route, and totals.

Prerequisite

The case for which you are viewing information must be open.

Procedure

Follow these steps to view a list of fluid/gas recordings on the Intra-Op Fluid/Gas Summary.

1. Press the Pre-Op, Holding, Intra-Op or Post-Op section tab at the bottom of the Recorder screen, then press the Summary page tab.

   –Or–
   On the View menu, choose Pre-Op, Holding, Intra-Op or Post-Op, then Summary.

   –Or–
   On the keyboard, press ALT V, P, S (Holding), ALT V, I, S (Intra-Op), or ALT V, T, S (Post-Op).

   The section Summary page appears. (Figure 11-4).

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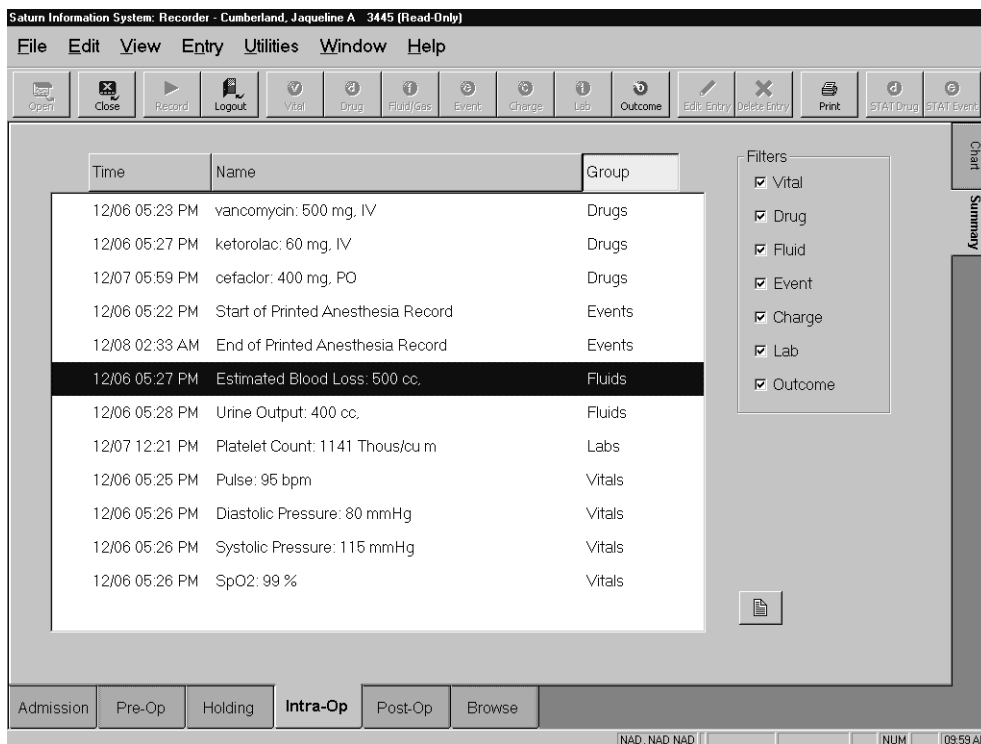
Figure 11-4. Intra-Op Summary (Fluids/Gases)

Each fluid/gas item in the list contains information about the recording of one fluid/gas measurement.

2. You can change the order in which the list is sorted by pressing the column header you want to sort by.

   Example: To sort the list alphabetically by fluid/gas name, press the Name column header. To sort the list chronologically, press the Time header.

3. To group the fluid/gas items together, do one of the following:

   • Click or press the Group header. Use the scroll bars to view fluids hidden from view.

   • Or, deselect every category in the Filters area (except for Fluid/Gas) by clearing the check boxes. Only the fluid/gas entries appear in the window.

4. To view more information about a particular lab in the list, double-click it. The item's dialog box appears. When you are done viewing it, press OK or Cancel.

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Editing Fluid/Gas Entries

You can edit fluid/gas entries from the Chart grid of the Holding, Intra-Op and Post-Op sections, or on a Summary page of the Pre-Op, Holding, Intra-Op, and Post-Op sections.

Editing Fluid/ Gas Entries on a Chart Grid

You can edit an existing fluid/gas entry from its cell on a Chart grid. You can also use an empty grid cell to enter a new recording of a fluid/gas already entered in the case record. (To access a Chart grid, see "Viewing Fluid/Gas Entries on a Chart Grid" on page 11-6.)

Prerequisite

The following prerequisites apply to this function:

- The case for which you are editing information must be open and recording (the Record button must be pressed).
- The Chart tab must be selected in the section where you want to edit a fluid/gas entry.

Procedure

Follow these steps to edit an existing fluid/gas entry (or add a new fluid/gas rate to a cell in an existing fluid/gas entry) on a Chart grid.

Mouse Shortcut: In place of steps 1 and 2, double-click the cell you want to edit and proceed to step 3.

1. Select a cell on the Chart grid:

   - To edit an existing fluid/gas entry, select the cell that contains the entry. Then select the New Entry tab in the Fluid/Gas Entry dialog box.

   - To enter a new fluid/gas entry, select the cell where the fluid/gas and time frame for recording the fluid/gas measurement intersect.

   - To enter a new value at the current time, select the fluid/gas name in the grid.

     Important: The cell must be empty. If the cell already contains an entry, you must use the Add function ("Adding Fluid/Gas Entries" on page 11-2) to create a new entry.

2. Press the Edit Entry button on the toolbar.

   –Or–
   On the Edit menu, choose Edit Entry.

   The Fluid/Gas Entry dialog box appears with existing information about the selected fluid/gas entry filled in. (See Figure 11-5.)

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Figure 11-5. Edit Fluid/Gas Entry Dialog Box

3. If the dialog box has tabs at the top, press the tab that represents the entry you want to edit.

Note: Tabs appear when the time interval you select on the grid contains entries for more than one measurement of the same fluid/gas.

4. Enter information about the fluid/gas measurement. For details, see Table 11-1 on page 11-4.

Note: Editing a cell by double-clicking it displays the applicable entry dialog box with a time already entered. This time is entered in proportion to the part of the cell that is clicked. **Ensure that the automatically entered time reflects the actual time of the new or modified fluid/gas entry.**

5. When you are finished entering information, press the OK button to save it, or press Cancel to start over.

The dialog box closes and the Chart grid is updated with the information you entered. The Summary page is also updated.

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**Editing Fluid/
Gas Entries on
a Summary
Page**

You can edit fluid/gas items on the Summary page in the Pre-Op, Holding, Intra-Op and Post-Op sections.

Prerequisite

The case for which you are editing information must be open, and the Summary page where you want to edit a fluid/gas entry must be selected.

Procedure

Follow this procedure to edit a fluid/gas entry using a Summary page. (To access the Summary pages, see "Viewing Fluid/Gas Entries on a Summary Page" on page 11-7.)

Mouse Shortcut: In place of steps 1 and 2, double-click the list item you want to edit and proceed to step 3.

1. On a Summary page (Figure 11-5 on page 11-10), select the fluid/gas item you want to edit.

2. On the toolbar, press the Edit Entry button.

   –Or–
   On the Edit menu, choose Edit Entry.

   The Add Fluid/Gas Entry dialog box appears with information about the selected fluid/gas entry filled in (Figure 11-5 on page 11-10.)

3. Enter or change information as needed. For details, see Table 11-1 on page 11-4.

4. When you are finished entering information, press the OK button to save it, or press Cancel to start over.

   The dialog box closes and the case record is updated. The Summary page and the Chart grid are also updated.

11 | Adding and Modifying Fluid/Gas Entries

Deleting Fluid/Gas Entries

You can delete fluid/gas entries from a Chart grid in the Holding, Intra-Op and Post-Op sections, or on a Summary page of the Pre-Op, Holding, Intra-Op and Post-Op sections.

Deleting a Single Entry in a Cell on a Chart Grid

You can delete a single fluid/gas entry on a Chart grid in the Holding, Intra-Op or Post-Op section. There is no chart from which you can delete entries made in the Pre-Op section. Instead, see "Deleting Entries on a Summary Page" on page 11-14.

Prerequisite

The case from which you are deleting information must be open.

Procedure

Follow these steps to delete a fluid/gas entry from its cell in the Chart grid:

1. On the Chart grid, select the cell that contains the entry you want to delete.

2. On the toolbar, press the Delete Entry button.

   –Or–
   On the Edit menu, choose Delete Entry.

   A confirmation message appears (Figure 11-6).
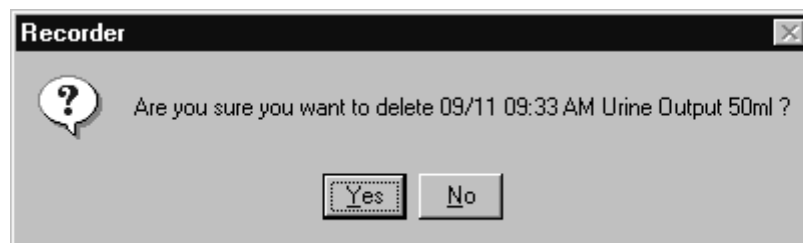
Figure 11-6. Single Entry Delete Dialog Box

3. Press the Yes button to delete the single entry.

Deleting Multiple Entries in a Cell on a Chart Grid

You can delete several fluid/gas entries from a Chart grid in the Holding, Intra-Op and Post-Op sections. There is no chart from which you can delete entries made in the Pre-Op section. Instead, see "Deleting Entries on a Summary Page" on page 11-14.

Prerequisite

The case from which you are deleting information must be open.

Procedure

Follow these steps to delete several fluid/gas entries from a cell in a Chart grid:

1. On the Chart grid in the section where you want to delete one or several fluid/gas entries in a cell, select the cell that contains the entries you want to delete.

2. On the toolbar, press the Delete Entry button.

   –Or–
   On the Edit menu, choose Delete Entry.

   A dialog box containing a checklist of the entries in that cell (Figure 11-7 on page 11-13) appears.

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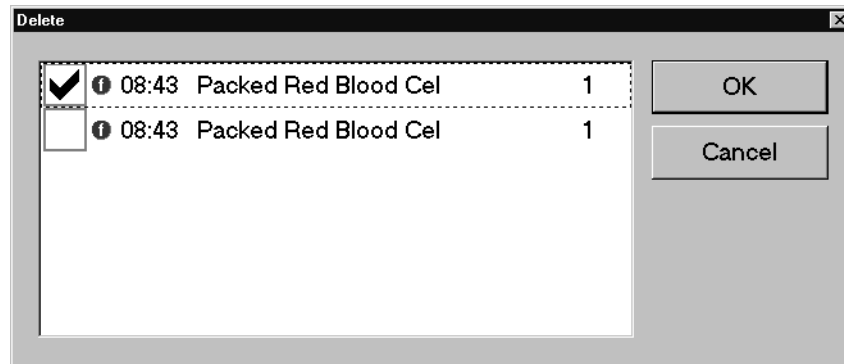
Figure 11-7. Multiple Entry Delete Dialog Box

3. Select the check boxes of the entries you want to delete, and then press the OK button to delete them.

Deleting All Entries in a Row of a Chart Grid

You can delete an entire row of fluid/gas entries on the Chart grid in the Holding, Intra-Op and Post-Op sections. There is no chart from which you can delete entries made in the Pre-Op section. Instead, see "Deleting Entries on a Summary Page" on page 11-14.

Prerequisite

The case from which you are deleting information must be open and the Holding, Intra-Op or Post-Op section tab must be selected.

Procedure

Follow these steps to delete an entire row of entries from a Chart grid:

1. On the Chart grid, select the first cell in the row that you want to delete, which contains the name of the fluid/gas for which entries have been recorded in that row.

2. On the toolbar, press the Delete Entry button.

    –Or–
    On the Edit menu, choose Delete Entry.

    A confirmation message appears (Figure 11-8).
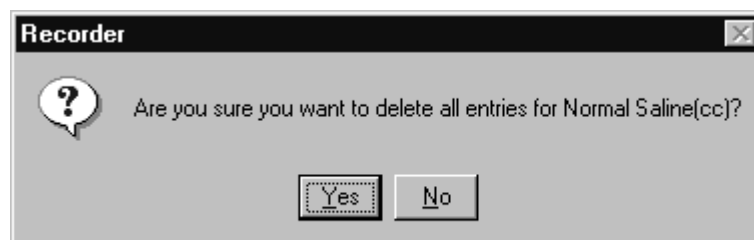
Figure 11-8. Row of Entries Delete Dialog Box

3. Press the Yes button to delete the row of entries.

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Deleting Entries on a Summary Page

You can delete a fluid/gas entry on the Summary pages of the Pre-Op, Holding, Intra-Op and Post-Op sections.

Prerequisite

The case from which you are deleting information must be open.

Procedure

Follow this procedure to delete a fluid/gas entry on a Summary page. (To access the Summary pages, see "Viewing Fluid/Gas Entries on a Summary Page" on page 11-7.)

1. On the Summary page of the section where you want to delete an existing fluid/gas entry (Figure 11-5 on page 11-10), select the fluid/gas entry you want to delete.

2. Press the Delete Entry button on the toolbar.

   –Or–
   On the Edit menu, choose Delete Entry.

   A confirmation message appears (Figure 11-9).
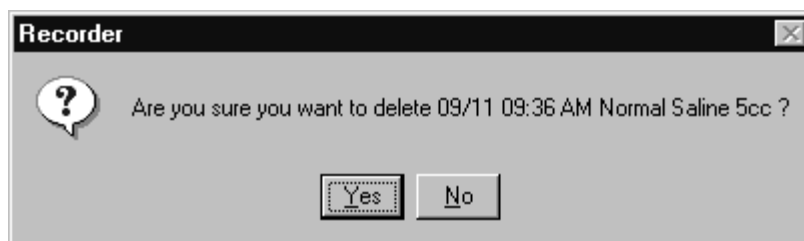
Figure 11-9. Fluid/Gas Summary Delete Dialog Box

3. Press the Yes button to delete the entry.

   The fluid/gas entry is deleted from the Summary page. It is also deleted from the Chart grid.

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Fluid Balance

The optional fluid balance grid can be displayed in the Holding, Intra-Op and Post-Op Charts. The fluid balance is calculated for each chart, as well as a perioperative balance.

The fluid balance grid consists of four rows (all values are converted and displayed in milliliters (ml)):

- The first row displays the *fluid in* totals for the chart.
- The second row displays the *fluid out* totals for the chart.
- The third row displays the balance totals for the chart (*fluid in* minus *fluid out*)
- The fourth row displays the overall balance total.

Each column in the fluid in, fluid out and chart balance grid shows the total for that column's time period. The perioperative balance column shows the total up to and including that column's time period. The fluid in, fluid out and chart balance row totals show the total for that row within the chart's time period. The perioperative balance row total shows the total up to and including the chart's time period.

Procedure   Follow this procedure to select the Fluid Balance option in the Holding, Intra-Op or Post-Op sections.

1. Press the Holding, Intra-Op or Post-Op tab at the bottom of the Recorder screen.

2. Select Case View Settings from the View menu. The Case View Settings dialog box appears.

3. Press the Holding, Intra-Op or Post-Op tab. The Intra-Op tab in the Case View Settings dialog box is shown in Figure 11-10 on page 11-16.

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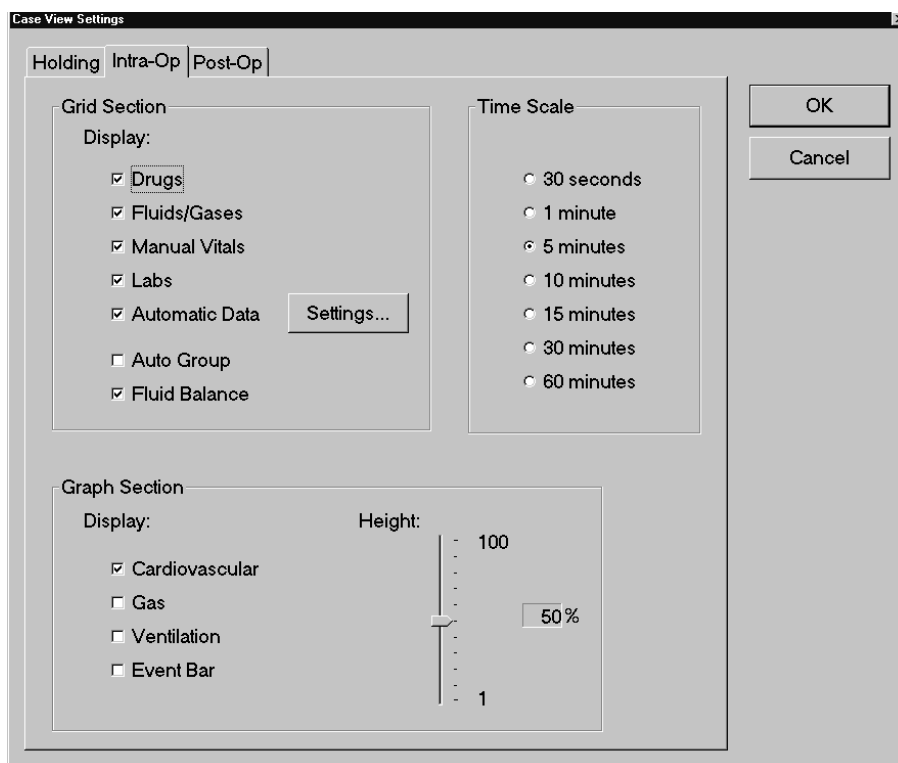
Figure 11-10. Fluid Balance Option in the Case View Settings Dialog Box

4. In the Grid Section area of the dialog box, select the Fluid Balance check box.

5. Press OK. The Holding, Intra-Op or Post-Op chart displays four rows in the bottom portion of the grid section. Sample fluid balance grid sections for the Holding, Intra-Op and Post-Op charts shown in Figure 11-11 on page 11-17, Figure 11-12 on page 11-18, and Figure 11-13 on page 11-20.
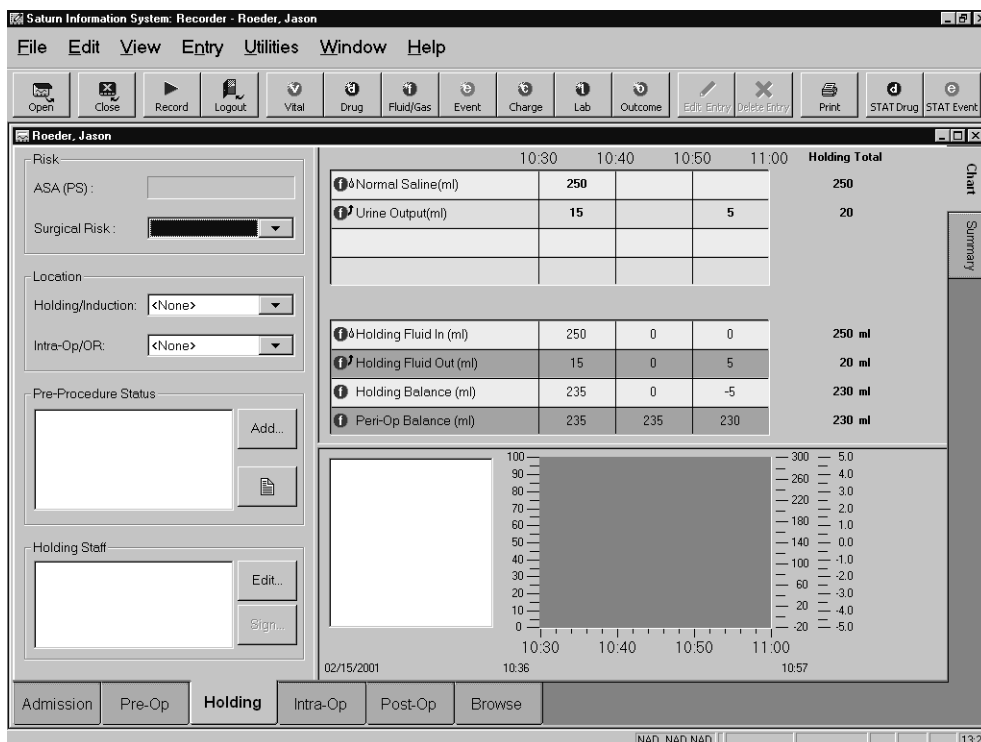
Figure 11-11. Sample Fluid Balance Screen, Holding Chart

Example: The screen above shows the following:

10:30 - **10:40**

Fluid In:	250 ml Normal Saline
Fluid Out:	15 ml Urine Output
Holding Balance	250 - 15 = 235
Peri-Op Balance:	235

10:40 - **10:50**

Fluid In:	0
Fluid Out:	0
Holding Balance:	0 - 0 = 0
Peri-Op Balance	235

10:50 - **11:00**

Fluid In:	0
Fluid Out:	5 ml Urine Output
Holding Balance:	0 - 5 = -5
Peri-Op Balance	230

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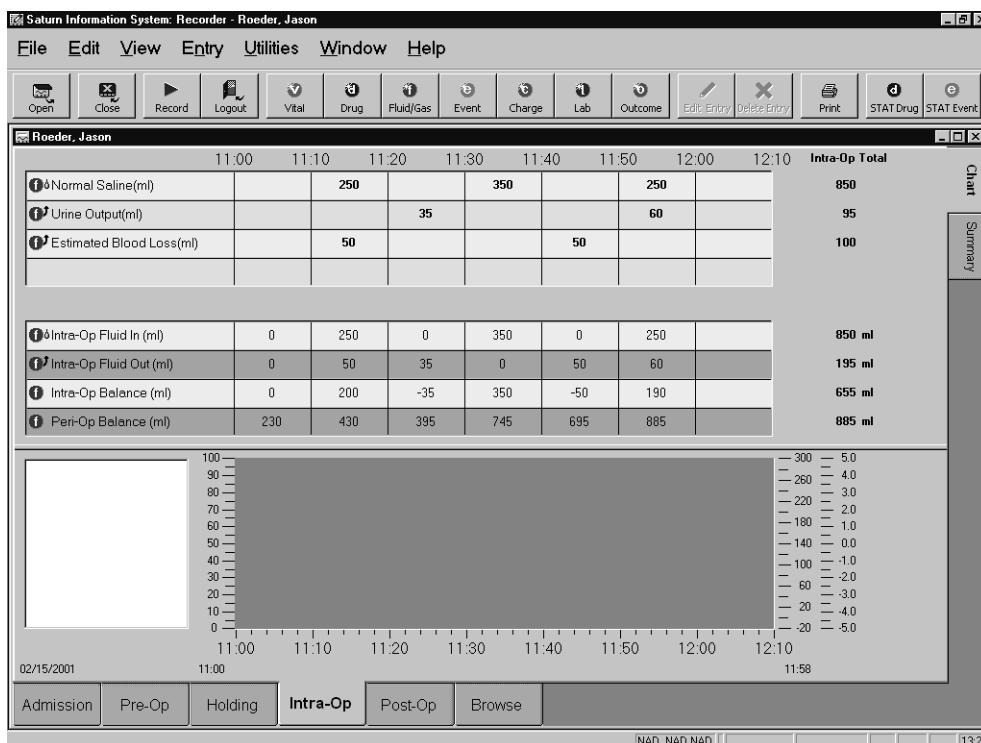
Figure 11-12. Sample Fluid Balance Screen, Intra-Op Chart

Example: The screen above shows the following:

11:00 - **11:10**

Fluid In:	0
Fluid Out:	0
Intra-Op Balance	0 - 0 = 0
Peri-Op Balance:	230 (from Holding)

11:10 - **11:20**

Fluid In:	250 ml Normal Saline
Fluid Out:	50 ml Urine Output
Intra-Op Balance:	250 - 50 = 200
Peri-Op Balance	430

11:20 - **11:30**

Fluid In:	0
Fluid Out:	35 ml Urine Output
Intra-Op Balance:	0 - 35 = -35
Peri-Op Balance:	395

11:30 - **11:40**

Fluid In:	350 ml Normal Saline
Fluid Out:	0
Intra-Op Balance:	350 - 0 = 350
Peri-Op Balance	745

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11:40 - **11:50**

Fluid In:	0
Fluid Out:	50 ml Blood Loss
Intra-Op Balance:	0 - 50 = -50
Peri-Op Balance:	695

11:50 - **12:00**

Fluid In:	250 ml Normal Saline
Fluid Out:	60 ml Urine Output
Intra-Op Balance:	250 - 60 = 190
Peri-Op Balance:	885

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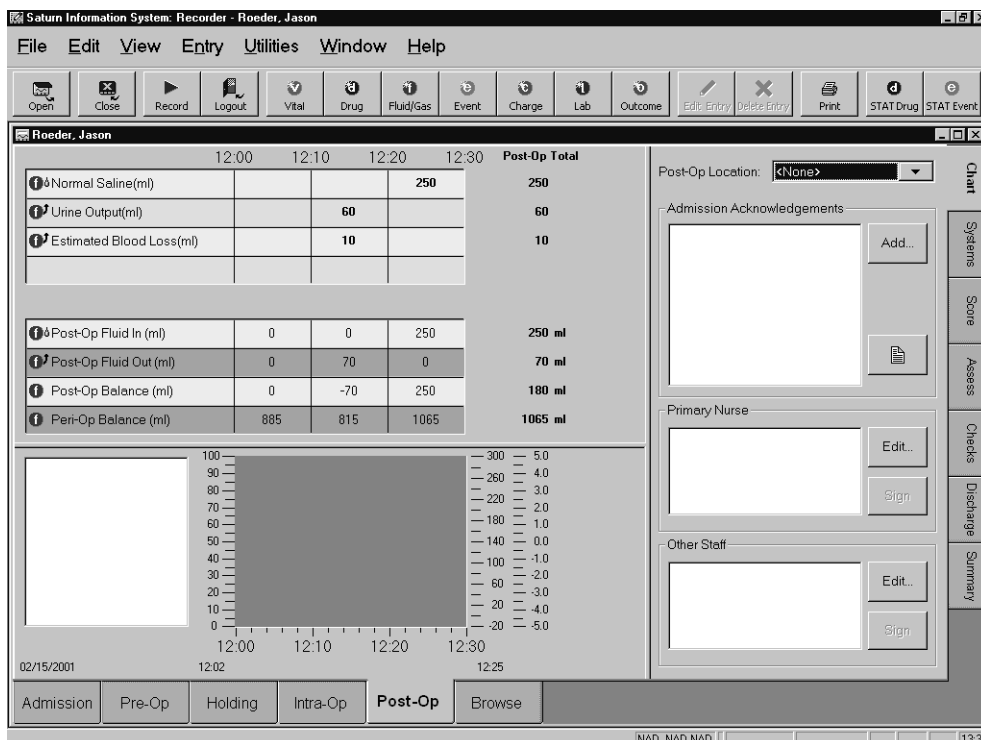
Figure 11-13. Sample Fluid Balance Screen, Post-Op Chart

Example: The screen above shows the following:

12:00 - **12:10**
Fluid In: 0
Fluid Out: 0
Post-Op Balance: 0 - 0 = 0
Peri-Op Balance: 885 (from Intra-Op)

12:10 - **12:20**
Fluid In: 0
Fluid Out: 70 (60 ml Urine Output, 10 ml Blood Loss)
Post-Op Balance: 0 - 70 = -70
Peri-Op Balance: 815

12:20 - **12:30**
Fluid In: 250 ml Normal Saline
Fluid Out: 0
Post-Op Balance: 250 - 0 = 250
Peri-Op Balance: 1065

12

Adding and Modifying Outcome Entries

This section explains how to add, view, update, and delete outcome entry information.

12 | Adding and Modifying Outcome Entries

Adding Outcome Entries

You can enter information about the outcome results of a case from anywhere in Recorder.

Note: If you want the outcome entries to be part of the record, the case must be recording. Outcome entries that you add before you start recording the case show up on the Summary page of the Pre-Op section. Refer to "Entering Pre-Op Data" on page 6-2.

Prerequisite   The case for which you are entering information must be open.

Procedure   Follow these steps to add an entry about an outcome result.

1. On the toolbar, press the Outcome button.

   –Or–
   On the Entry menu, choose Outcomes.

   –Or–
   On the keyboard, press F10.

   The Add Outcome Selection dialog box appears (Figure 12-1). It contains one or more pages. Each page contains a list of outcomes from which you can select an outcome and then add an entry on the result of that outcome.

   The default page is *All*, which contains a list of all of the available outcomes that you can record. Other pages appear after the *All* page if you created them using the List Manager application. These other pages (i.e., Airway, Cardio-vascular, etc.) can contain lists of outcomes that fall into categories that you choose and create.
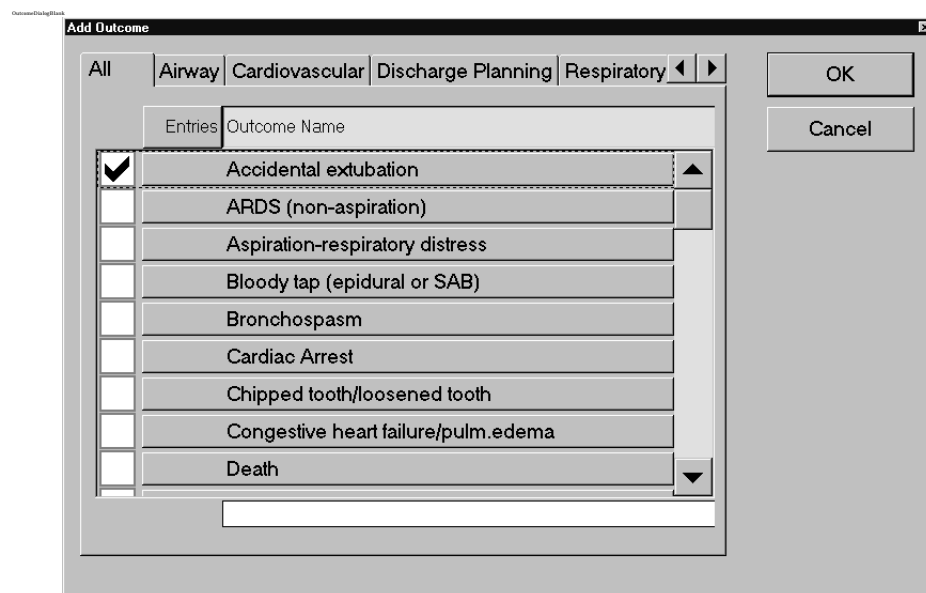
Figure 12-1. Add Outcome Selection Dialog Box

2. Select a page tab. You can change the order in which the list is sorted by pressing the column header you want to sort by.

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Example: To sort the list alphabetically by outcome name, press the Name column header. To sort the list to show which outcomes have already been selected, press the Entries header.

3. Select one or more outcome item check boxes and press the OK button. The outcome item(s) are placed on the Summary page of the Pre-Op, Holding, Intra-Op or Post-Op section for you to complete now or later.

4. Do one of the following:

   • If you checked only one item, double-click it.

   • If you checked several items, click OK. Then select the Summary page tab and double-click an item you just entered.

   The Add Outcome Entry dialog box appears (Figure 12-2).

Figure 12-2. Add Outcome Entry Dialog Box

5. Enter information about the outcome. For details, see Table 12-1 on page 12-4.

6. When you are finished entering information, press the OK button.

   Note: When you enter or change data, you may be required to enter your password. If the Enter Password dialog box appears, refer to "Password Restricted Data" on page 2-39.

   The dialog box closes, and the information is added to the case record. The information is also added to the Summary page, which is discussed throughout this section.

12 | Adding and Modifying Outcome Entries

The following table describes the options in the Outcome Entry dialog box.

Table 12-1. Add Outcomes Entry Dialog Box Options

Option	Description
Time	The time of outcome recording in *hh:mm* format. Leading zeros are not required. You can select the hours and minutes with the arrows, or enter them from the keyboard.
	Your system administrator determines whether your system will display 12- or 24-hour time. Valid values for 12-hour time are: hours are from 1 to 12, and minutes are from 0 to 59. When 12-hour time is used, you must also select the AM or PM option button. Valid values for 24-hour time are: hours are from 1 to 24, and minutes are from 0 to 59. When 24-hour time is used, AM and PM do not appear as selectable option buttons.
	Examples: 12:00 AM for midnight (12-hour time) 12:00 PM for noon (12-hour time) 24:00 for midnight (24-hour time) 12:00 for noon (24-hour time) Default: For new outcome entries, the current time. For previous outcome entries, the last time entered.
Date	The date of outcome recording in *mm/dd/yyyy, yyyy.mm.dd*, or any other format in which your system administrator sets up your system. Leading zeros are not required. You can select the date from a drop-down calendar or enter it from the keyboard.
	Default: For new outcome entries, the current date. For previous outcome entries, the last date entered.
Location	The location where the outcome occurred. You select the location from the drop-down list.
	Default: None

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Table 12-1. Add Outcomes Entry Dialog Box Options (continued)

Option	Description
Severity	The level of severity for the outcome. You can change the default value by moving the severity slide button on the Outcome Entry dialog box. The severity description appears in the display window below the severity slide button.
	You can select the following severity levels for an outcome:
	0 No change in hospital course
	1 Additional unexpected care
	2 Prolonged hospitalization with or without additional unexpected care
	3 Prolonged risk to patient associated with significant increase in level of care
	4 Reversible organ damage requiring additional drugs, tests, care
	5 Reversible organ damage involving prolonged hospitalization with or without additional care
	6 Reversible organ damage involving prolonged hospitalization with significant increased level of care
	7 Irreversible damage with residual that does not significantly affect function of an individual
	8 Irreversible damage associated with residual that causes significant change in function of an individual
	9 Irreversible damage with residual that incapacitates the individual or places the individual's life at risk
	10 Death
	Default: 0 - No change in patient hospital course
Explanation	Any explanation that you would like to enter about the outcome.
	Default: No default
Resolution	Any description that you want to enter about the resolution used for the outcome (up to 2,048 characters). When you type data in this text box, a "paper" icon appears next to the entry on a Summary page. Refer to "Attachment Buttons" on page 2-33 for more information.
	Default: No default
OK Button	Press the OK button when you are finished making changes. Any information you entered is saved to the program.
Cancel Button	Press the Cancel button when you want to escape the dialog box without saving any of the changes you have just made, or when you simply are viewing the information and do not want to make changes.

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Viewing Outcome Entries

You can view outcome results on the Summary page of the Pre-Op, Holding, Intra-Op and Post-Op sections. (Outcomes entered before recording starts are displayed on the Summary page of the Pre-Op section. Refer to "Entering Pre-Op Data" on page 6-2.)

Summary pages contain a list of all outcomes recorded, as well as each outcome's date and time, location, severity, explanation, and resolution.

Prerequisite   The case for which you are viewing information must be open.

Procedure   Follow these steps to view a list of outcome results on the Summary pages.

1. Press the Pre-Op, Holding, Intra-Op or Post-Op section tab at the bottom of the Recorder screen, and then press the Summary tab.

   –Or–
   On the View menu, choose Pre-Op, Holding, Intra-Op or Post-Op, then Summary.

   –Or–
   On the keyboard, press ALT V, H, S (Holding), ALT V, I, S (Intra-Op), or ALT V, T, S (Post-Op).

   The Summary page appears for the section where you want to view outcome entries (Figure 12-3).

Figure 12-3. Holding Summary Page (Outcomes)

2. You can change the order in which the list is sorted by pressing the column header you want to sort by.

Example: To sort the list alphabetically by outcome name, press the Name column header. To sort the list to show which outcomes have already been selected, press the Entries header.

3. To group the outcome items together, do one of the following:

   • Click or press the Group header. Use the scroll bars to view outcome information which may be hidden from view.

   • Or, deselect every category in the Filters area (except for Outcome) by clearing the check boxes. Only the outcome entries appear in the window.

4. To view more information about a particular outcome in the list, double-click it. The item's dialog box appears. When you are done viewing it, press OK or Cancel.

Editing Outcome Entries

You can edit outcome entries on the Summary page in the Pre-Op, Holding, Intra-Op and Post-Op sections.

Prerequisite   The case for which you are editing information must be open, and the section's Summary page tab must be selected.

Procedure   Follow this procedure to edit an outcome result on a Summary page. (To access the Summary pages, see "Viewing Outcome Entries" on page 12-6.)

Mouse Shortcut: In place of steps 1 and 2, you can double-click the outcome result you want to edit and proceed to step 3.

1. On the Summary page (Figure 12-4 on page 12-8), select the outcome you want to edit.

2. Press the Edit Entry button on the toolbar.

   –Or–
   On the Edit menu, choose Edit Entry.

   The Add Outcome Entry dialog box appears with information about the selected outcome result filled in. (See Figure 12-2 on page 12-3.)

3. Enter or change information as needed. For details, see Table 12-1 on page 12-4.

4. When you are finished entering information, press the OK button to save it, or press Cancel to start over.

   The dialog box closes and the Summary page is updated.

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Deleting Outcome Entries

You can delete an outcome from the Summary pages of the Pre-Op, Holding, Intra-Op and Post-Op sections.

Prerequisite   The case from which you are deleting information must be open, and the section Summary page tab must be selected.

Procedure   Follow this procedure to delete an outcome result on a Summary page. (To access the Summary pages, see "Viewing Outcome Entries" on page 12-6.)

1. On the Summary page where you want to delete an outcome, select the outcome result you want to delete.

2. Press the Delete Entry button on the toolbar.

   –Or–
   On the Edit menu, choose Delete Entry.

   A confirmation message appears (Figure 12-4).
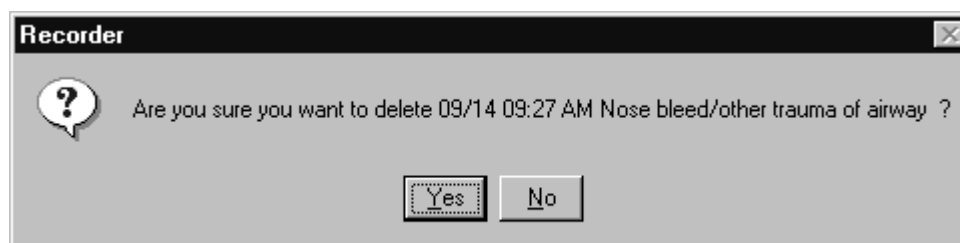
Figure 12-4. Intra-Op Outcome Summary Delete Dialog Box

3. Press the Yes button to delete the entry from the Summary page.

   The outcome result is deleted from the case record and from the Summary page.

13

Adding and Modifying Lab Entries

This section explains how to add, view, update, and delete information about patient lab test results.

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Adding Lab Entries

You can enter lab test result information from anywhere in Recorder.

Note: If you want the lab test result entries to be part of the record, the case must be recording. Lab result entries that you add before you start recording the case show up on the Summary page and the Exam page in the Pre-Op section.

Prerequisites The case for which you are entering information must be open and recording.

Procedure Follow these steps to add an entry about a lab test result. You can perform this procedure from anywhere in Recorder.

1. On the toolbar, press the Lab button.

   –Or–
   On the Entry menu, choose Labs.

   –Or–
   On the keyboard, press F9.

   The Add Lab Test Result Selection dialog box appears (Figure 13-1). It contains one or more pages. Each page contains a list of labs from which you can make selections and enter the results.

   The default page is *Template*, which contains a list of all of the labs that are available to you if you loaded an environment when you opened or created the case. The *All* page lists all labs that are available to you. Other pages appear after the *All* page if you created these pages using the List Manager application. These other pages (i.e., Chemistries, Hematology, CBC, etc.) can contain lists of lab tests that fall into categories that you choose and create.

Figure 13-1. Add Lab Test Result Selection Dialog Box

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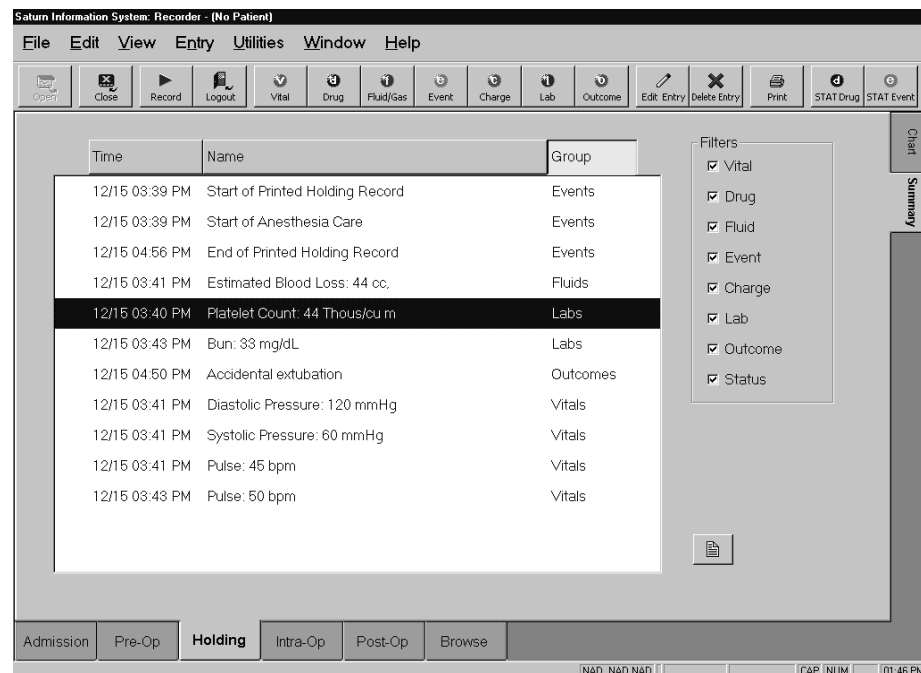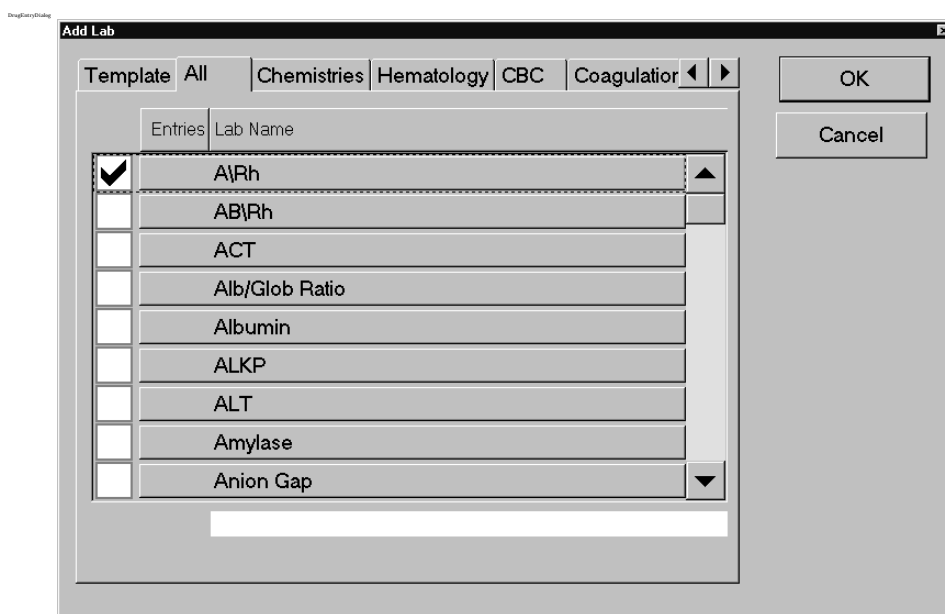2. Select a page tab in the Add lab Test Result Selection dialog box (Figure 13-1 on page 13-2).. You can change the order in which the list is sorted by pressing the column header you want to sort by.

   Example: To sort the list alphabetically by lab test name, press the Lab Name column header. To sort the list to show which lab tests have already had results entered, press the Entries header.

3. Select one or more lab test item check boxes.

4. Do one of the following:

   • If you checked only one item, double-click it (anywhere except in the check box).

   • If you checked several items, click OK. Then select the Summary page tab and double-click an item you just entered.

     The Add Lab Test Result Entry dialog box appears (Figure 13-2).

Figure 13-2. Add Lab Test Result Entry Dialog Box

5. Enter information about the lab result. For details, see Table 13-1 on page 13-4.

   Note: Tabbed pages appear in the Add Lab Test Result Entry dialog box if you recorded a result for this lab earlier in the case. For example, the tabs at the top of the pages will display the earlier times (i.e., 09:22 10% in Figure 13-2), plus a New Entry page.

   Use the keyboard to type important notes and information in the Remarks text box. A triangle icon appears in the upper right corner of a grid cell when you add remarks to a lab entry.

6. When you are finished entering information, press the OK button.

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Note: When you enter or change data, you may be required to enter your password. If the Enter Password dialog box appears, refer to "Password Restricted Data" on page 2-39.

The dialog box closes and the information is added to the case record. The information is also added to the Chart grid and the Summary page, as discussed throughout this section.

Shortcut: If you are entering a specific lab into the case record for the first time, you must use the Lab button. However, if you are entering another result for a lab test that you have already entered into the case record, you may be able to use the Edit Entry button to enter the new result. (See "Editing Lab Entries on a Chart Grid" on page 13-8.) Using the Edit Entry button is usually quicker because Recorder automatically fills in some of the dialog box information for you on the New page.

The following table describes the options in the Add Lab Test Result Entry dialog box.

Table 13-1. Add Lab Test Results Entry Dialog Box Options

Option	Description
Time	The time of the lab test result in *hh:mm* format. Leading zeros are not required. You can select the hours and minutes with the arrows, or enter them from the keyboard.
	Your system administrator determines whether your system will display 12- or 24-hour time. Valid values for 12-hour time are: 1 to 12 (hours) and 0 to 59 (minutes). When 12-hour time is used, you must also select the AM or PM option button. Valid values for 24-hour time are: 1 to 24 (hours), and 0 to 59 (minutes). When 24-hour time is used, AM and PM option buttons do not appear.
	Examples: 12:00 AM for midnight (12-hour time)
	12:00 PM for noon (12-hour time)
	24:00 for midnight (24-hour time)
	12:00 for noon (24-hour time)
	Default: For new lab test result entries, the current time. For previous lab test result entries, the last time entered.
Date	The date in *M/d/yyyy, yyyy.M.d*, or any other format in which your system administrator sets up your system. Leading zeros are not required. You can select the date from a drop-down calendar or enter it from the keyboard. Refer to "Selection Calendars" on page 2-26 for more information.
	Default: For new lab test result entries, the current date. For previous lab test result entries, the last date entered.

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Table 13-1. Add Lab Test Results Entry Dialog Box Options (continued)

Option	Description
Unit	The unit of measure for the lab test result. You can change the default value by selecting another unit from the list box. *Default:* None, or a site-specific default set by your system administrator using the List Manager program.
Remarks	Any comments that you would like to enter about the entry (up to 2,048 characters). A "paper" icon appears next to the entry on a Summary page if you added remarks to it. Refer to "Attachment Buttons" on page 2-33 for more information. *Default:* None
Result	The numerical value of the lab test result. (Characters may also be entered.) *Default:* None. A numeric keypad is provided.

Viewing Lab Entries

You can view the lab result entries from two locations in Recorder: the Summary page of the Pre-Op, Holding, Intra-Op and Post-Op sections, and the Chart grids of the Pre-Op (Exam page), Holding, Intra-Op and Post-Op sections.

Viewing Lab Entries on a Chart Grid

The Chart grid shows all lab test results by their time of entry. Totals, if applicable, are shown in the Total column in the grid section of the Chart.

Prerequisite

The case for which you are viewing information must be open.

Procedure

Follow these steps to view lab test results on a Chart grid.

1. Press the Pre-Op, Holding, Intra-Op or Post-Op section tab at the bottom of the Recorder screen. (If you pressed Pre-Op, now press the Exam page tab.)

   –Or–
   On the View menu, choose Pre-Op then Exam, or Holding, Intra-Op or Post-Op, and then Chart.

   –Or–
   On the keyboard, type ALT V, P, E (Pre-Op) ALT V, H, C (Holding), ALT V, I, C (Intra-Op), or ALT V, T, C (Post-Op).

   The section Chart appears. The grid is displayed in the upper part of the Chart (Figure 13-3).

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Figure 13-3. Intra-Op Chart Grid—Lab Test Result Entries

Rows that contain lab result entries are indicated by the symbol ❶. Each row of lab result entries represents a unique lab test and unit-of-measure combination.

Important: Cells within each row show individual lab test results entered during the time intervals specified in the column headers. If more than one result was entered in a given time interval, the last lab result entered is the one that's displayed in the cell on the grid. You can view all the entries made during that time interval by double-clicking the cell.

2. When you are ready to leave the Chart page, press another section or page tab.

Viewing Lab Entries on a Summary Page

The Summary pages in the Pre-Op, Holding, Intra-Op and Post-Op sections contain lists of all lab test results, as well as the date and time of entry and the unit of measure.

Prerequisite

The case for which you are viewing information must be open.

Procedure

Follow these steps to view a list of lab test results on a Summary page.

1. Press the Pre-Op, Holding, Intra-Op or Post-Op section tab at the bottom of the Recorder screen; then press the Summary tab.

   –Or–
   On the View menu, choose Pre-Op, Holding, Intra-Op or Post-Op, then Summary.

   –Or–
   On the keyboard, press ALT V, P, S (Pre-Op), ALT V, H, S (Holding), ALT V, I, S (Intra-Op), or ALT V, T, S (Post-Op).

   The Summary page appears for the section you want to view data (Figure 13-4). Each row in the list contains information about any lab test results that were entered.
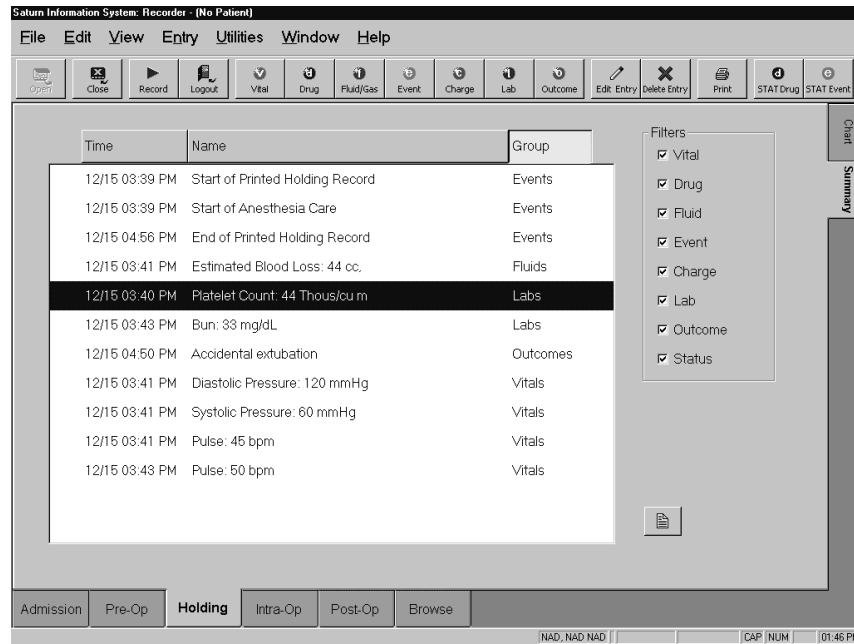
Figure 13-4. Holding Summary Page

2. You can change the order in which the list is sorted by pressing the column header you want to sort by.

   Example: To sort the list alphabetically by lab test result name, press the Name column header. To sort the list chronologically, press the Time column header.

3. To view more information about a particular lab in the list, double-click it. The item's dialog box appears. When you are done viewing it, press OK or Cancel.

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Editing Lab Entries

You can edit lab test result entries on a Pre-Op Exam page grid, on a Chart grid in the Holding, Intra-Op and Post-Op sections, or on a Summary page in the Pre-Op, Holding, Intra-Op and Post-Op sections.

Editing Lab Entries on a Chart Grid

You can edit an existing lab entry from its cell in a Chart grid. You can also enter a new lab test result in an empty grid cell. (To access a Chart grid, see "Viewing Lab Entries on a Chart Grid" on page 13-5.)

Prerequisite

The following prerequisites apply to this function:

- The case for which you are editing information must be open.
- The Chart tab must be selected in the section where you want to edit a lab entry (the Exam tab for Pre-Op).
- The case must be recording (the Record button must be pressed), except for Pre-Op.

Procedure

Follow these steps to edit an existing lab entry (or to add a new lab result to a cell in an existing lab entry) on a Chart grid.

Mouse Shortcut: In place of steps 1 and 2, double-click the cell you want to edit and proceed to step 3.

1. Select a cell on the Chart grid:

   - To edit an existing lab entry, select the cell that contains the entry. In the Lab Entry dialog box, select the New Entry tab.

   - To enter a new lab result in an existing lab entry, select the cell where the lab test result and time frame for the lab test result intersect.

   - To enter a new result at the current time, select the lab name in the grid.

2. On the toolbar, press the Edit Entry button.

   –Or–
   On the Edit menu, choose Edit Entry.

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The Lab Test Result Entry dialog box appears (Figure 13-5) with existing information about the selected lab test result filled in.

Figure 13-5. Edit Lab Test Result Entry Dialog Box (Grid)

3. If the dialog box has several pages or tabs, press the tab that represents the lab test you want to edit.

   Note: Tabs appear when the time interval you select on the grid contains entries for more than one value of the same lab test. Press the tab you want to edit (i.e., 10:56 or New Entry in Figure 13-5).

4. Enter or change information about the lab test result (Table 13-1 on page 13-4).

   Important: Editing a cell by double-clicking it displays its associated entry dialog box with a time of entry already entered. This time is entered in proportion to the part of the cell that is clicked. **Ensure that the automatically entered time reflects the actual time of the new or modified lab test entry.**

5. When you are finished entering or changing information, press the OK button to save it, or press Cancel to start over.

   The dialog box closes and the Chart grid is updated with the information you entered. The Summary page is also updated.

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Editing Lab Entries on a Summary Page

You can use the Summary pages in the Pre-Op, Holding, Intra-Op or Post-Op sections to edit any lab test result on the list, including time, date, unit, remarks and result.

Prerequisite

The case for which you are editing information must be open, and the Summary page where you want to edit a lab entry must be selected.

Procedure

Follow this procedure to edit a lab entry using a Summary page. (To access the Summary pages, see "Viewing Lab Entries on a Summary Page" on page 13-6.)

Mouse Shortcut: In place of steps 1 and 2, you can double-click the list item you want to edit and proceed to step 3.

1. On a Summary page (Figure 13-4 on page 13-7), select the lab test you want to edit.

2. On the toolbar, press the Edit Entry button.

   –Or–
   On the Edit menu, choose Edit Entry.

   The Lab Test Result Entry dialog box appears (Figure 13-6) with information about the selected lab test result filled in.

Figure 13-6. Edit Lab Test Result Entry Dialog Box (Summary)

3. Enter or change information as needed. For details, see Table 13-1 on page 13-4.

4. When you are finished entering information, press the OK button to save it, or press Cancel to start over.

   The dialog box closes and the Summary page is updated. The Chart grid is also updated.

Deleting Lab Entries

You can delete lab test result entries on a Chart grid in the Pre-Op (Exam page) Holding, Intra-Op, or Post-Op sections, or a Summary page in the Pre-Op, Holding, Intra-Op or Post-Op sections.

Deleting a Single Entry in a Cell on a Chart Grid

You can delete a single lab test result on a Chart grid in the Pre-Op (Exam page) Holding, Intra-Op, or Post-Op section.

Prerequisite

The case from which you are deleting information must be open.

Procedure

Follow these steps to delete a lab test result from its cell in a Chart grid:

1. On the Chart grid, select the cell that contains the result you want to delete.

2. On the toolbar, press the Delete Entry button.

   –Or–
   On the Edit menu, choose Delete Entry.

   A confirmation message appears (Figure 13-7).
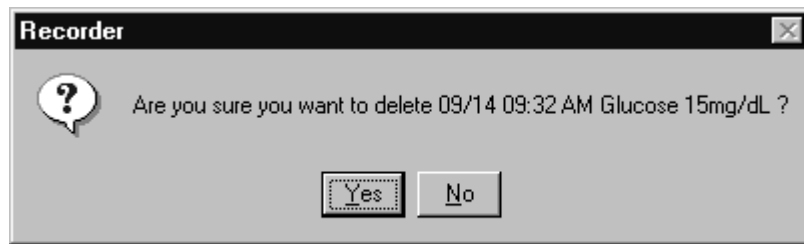
Figure 13-7. Single Entry Delete Dialog Box

3. Press the Yes button to delete the single lab test result.

Deleting Multiple Entries in a Cell on a Chart Grid

You can delete several lab test result entries from a Chart grid in the Pre-Op (Exam page), Holding, Intra-Op and Post-Op sections.

Prerequisite

The case from which you are deleting information must be open.

Procedure

Follow these steps to delete several lab test results from a cell in a Chart grid:

1. On the Chart grid in the section where you want to delete one or several lab test entries in a cell, select the cell that contains the entries you want to delete.

2. On the toolbar, press the Delete Entry button.

   –Or–
   On the Edit menu, choose Delete Entry.

   A dialog box containing a checklist of the lab results in that cell appears (Figure 13-8 on page 13-12).

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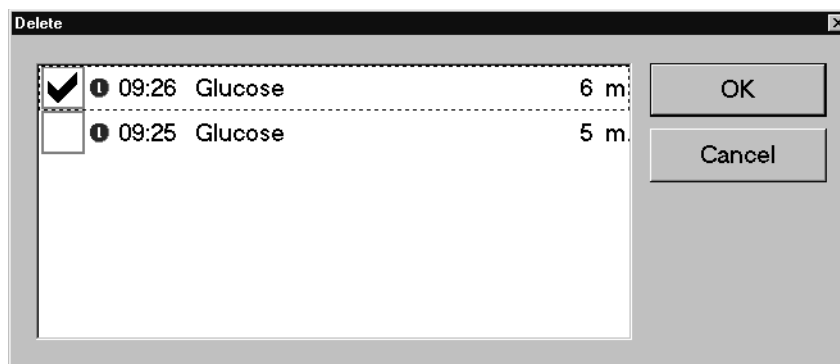
Figure 13-8. Multiple Entry Delete Dialog Box

3. Select the check boxes of the entries you want to delete and then press the OK button to delete them.

Deleting All Entries in a Row on a Chart Grid

You can delete an entire row of lab test results on a Chart grid in the Holding, Intra-Op, and Post-Op sections, or on the Exam page in the Pre-Op section.

Prerequisite

The case from which you are deleting information must be open and the Pre-Op (Exam page), Holding, Intra-Op or Post-Op section tab must be selected.

Procedure

Follow these steps to delete an entire row of results from a Chart grid:

1. On the Chart grid, select the first cell in the row that you want to delete, which contains the name of the lab test for which entries have been recorded in that row.

2. On the toolbar, press the Delete Entry button.

    –Or–
    On the Edit menu, choose Delete Entry.

    A confirmation message appears (Figure 13-9).
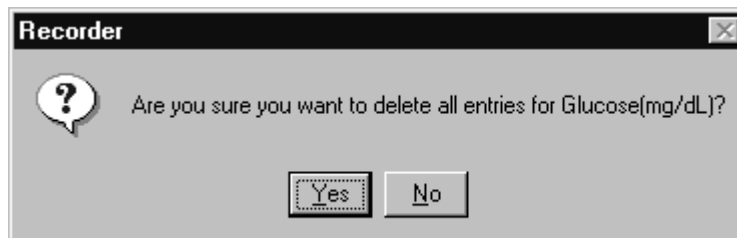
Figure 13-9. Row of Entries Delete Dialog Box

3. Press the Yes button to delete the row of entries.

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Deleting Lab Entries on a Summary Page

You can delete a lab test entry on the Summary page of the Pre-Op, Holding, Intra-Op and Post-Op sections. Each lab result entered appears as a separate entry on the Summary page.

Prerequisite

The case from which you are deleting information must be open.

Procedure

Follow this procedure to delete a lab test entry on a Summary page. (To access the Summary pages, see "Viewing Lab Entries on a Summary Page" on page 13-6.)

1. On the Summary page of the section where you want to delete an existing lab entry (Figure 13-4 on page 13-7), select the lab entry you want to delete.

2. On the toolbar, press the Delete Entry button.

   –Or–
   On the Edit menu, choose Delete Entry.

   A confirmation message appears.

Recorder

? Are you sure you want to delete 09/14 09:26 AM Glucose 6mg/dL ?

[Yes] [No]
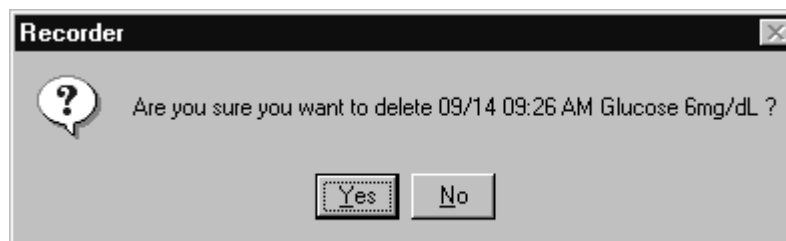
Figure 13-10. Intra-Op Lab Summary Delete Dialog Box

3. Press the Yes button to delete the entry from the Summary page. It is also deleted from the Chart grid.

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Adding and Modifying Vital Entries

This section explains how to add, view, update, and delete information about vitals that you record manually.

Adding Manual Vital Entries

You can enter information about the vitals of a patient during a case from anywhere in Recorder.

Note: If you want the manual vital entries to be part of the record, the case must be recording. Manual vital entries that you add before you start recording the case appear on the Exam and Summary pages of the Pre-Op section.

Prerequisites The case for which you are entering information must be open and recording.

Procedure Follow these steps to add a manual vital entry.

1. On the toolbar, press the Vital button.

   –Or–
   On the Entry menu, choose Vitals.

   –Or–
   On the keyboard, press F4.

   The Add Vital Selection dialog box appears (Figure 14-1). It contains one or more pages. Each page contains a list of vitals from which you can make selections and enter the results.

   The default page is *Template*, which contains a list of all of the labs that are available to you if you loaded an environment when you opened or created the case. The *All* page lists all vitals that are available to you. Other pages appear after the *All* page if you created these pages using the List Manager application. These other pages (i.e., Cardiovascular, Gas, Ventilation, etc.) can contain lists of lab tests that fall into categories that you choose and create.
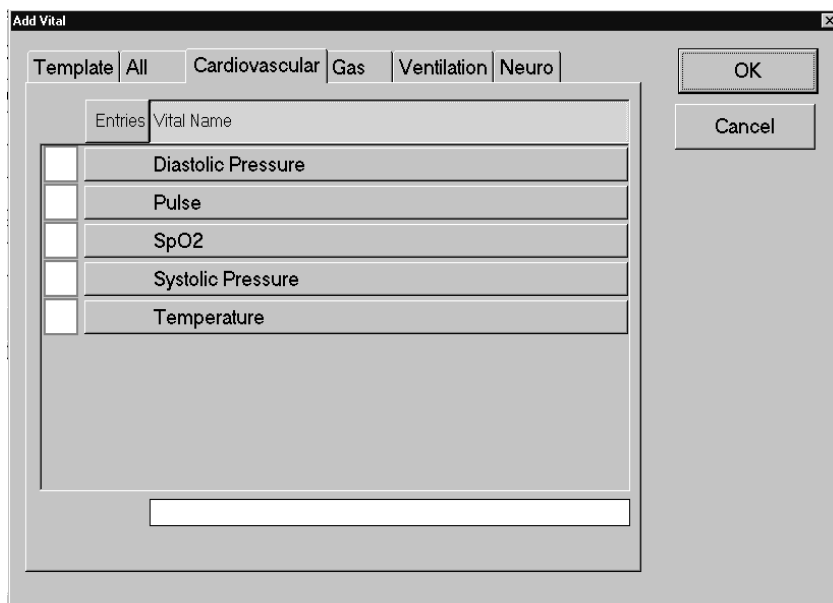
Figure 14-1. Add Vital Selection Dialog Box

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2. Select a page tab. You can change the order in which the list is sorted by pressing the column header you want to sort by.

   Example: To sort the list alphabetically by vital name, press the Name column header. To sort the list to show which lab tests have already had results entered, press the Entries header. To find the vital name by doing a speed search, refer to "Speed Search" on page 2-17.

3. Select one or more vital item check boxes. The vital(s) are placed on the Summary page of the Pre-Op, Holding, Intra-Op and Post-Op sections for you to complete now or later

4. Do one of the following:

   • If you checked only one item, click it. The Add Vital Entry dialog box appears (Figure 14-2).

   • if you checked several items, click OK. Now select the Summary page tab, and select a vital you just entered.

Figure 14-2. Add Vital Entry Dialog Box

5. Enter information about the vital you are recording. For details, see Table 14-1 on page 14-4.

   Note: Tabbed pages appear in the Add Vital Entry dialog box if you recorded these manual vitals earlier in the case. For example, the tabs at the top of the pages will display the earlier times (i.e., 11:05 – C in Figure 14-2), plus a New Entry page.

   Use the keyboard to type important notes and information in the Remarks text box. A triangle icon appears in the upper right corner of a grid cell when you add remarks to a vital entry.

6. When you are finished entering information, press the OK button.

   Note: When you enter or change data, you may be required to enter your password. If the Enter Password dialog box appears, refer to "Password Restricted Data" on page 2-39.

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The dialog box closes and the information is added to the case record. The Summary page and the Chart grid are also updated.

Shortcut: If you are recording a manual vital that you have already entered into the case record, you can use the Edit function to enter a new recording of that manual vital. (See "Editing Vital Entries on a Chart Grid" on page 14-7.) Using the Edit function is usually quicker because Recorder automatically fills in some of the dialog box information for you. However, if you are entering a manual vital into the case record for the first time, you must use the Add function.

The following table describes the options in the Add Vital Entry dialog box.

Table 14-1. Add Vital Entry Dialog Box Options

Option	Description
Time	The time of manual vital recording in *hh:mm* format. Leading zeros are not required. You can select the hours and minutes with the arrows, or enter them from the keyboard.
	Your system administrator determines whether your system will display 12- or 24-hour time. Valid values for 12-hour time are: 1 to 12 (hours) and 0 to 59 (minutes). When 12-hour time is used, you must also select the AM or PM option button. Valid values for 24-hour time are: hours are from 1 to 24, and minutes are from 0 to 59. When 24-hour time is used, AM and PM option buttons do not appear.
	Examples: 12:00 AM for midnight (12-hour time)
	12:00 PM for noon (12-hour time)
	24:00 for midnight (24-hour time)
	12:00 for noon (24-hour time)
	Default: For new manual vital entries, the current time. For previous manual vital entries, the last time entered.
Date	The date in *M/d/yyyy, yyyy.M.d*, or any other format in which your system administrator sets up your system. Leading zeros are not required. You can select the date from a drop-down calendar or enter it from the keyboard. Refer to "Selection Calendars" on page 2-26 for more information.
	Default: For new manual vital entries, the current date. For previous manual vital entries, the last date entered.
Unit	The unit of measure for the manual vital. You can change the default value by selecting another unit from the list box.
	Default: No default, or a site-specific default set by your system administrator.

Table 14-1. Add Vital Entry Dialog Box Options (continued)

Option	Description
Value	The numerical value of the manual vital recording. *Default:* No default. A numeric touch pad is provided.
Remarks	Any comments that you would like to enter about the entry (up to 2,048 characters). If you add remarks, a "paper icon" appears next to the item on the Summary page. Refer to "Attachment Buttons" on page 2-33 for more information. *Default*: None

Viewing Manual Vital Entries

You can view the manual vital entries from two locations in Recorder: the Summary pages of the Pre-Op, Holding, Intra-Op and Post-Op sections, and the Chart grid of the Pre-Op (Exam page) Holding, Intra-Op and Post-Op sections. (Manual vitals entered before recording starts are displayed on the Exam and Summary pages of the Pre-Op section.)

Viewing Vital Entries on a Chart Grid

The Chart grids in the Holding, Intra-Op and Post-Op sections show all manual vitals by their time of entry. The grid on the Exam page of the Pre-Op section shows a vital with its value.

Prerequisite

The case for which you are viewing information must be open.

Procedure

Follow these steps to view manual vitals on a Chart grid.

1. Press the Pre-Op, Holding, Intra-Op or Post-Op section tab at the bottom of the Recorder screen. If you selected Pre-Op, then press the Exam tab.

   –Or–
   On the View menu, choose Pre-Op (then Exam), Holding, Intra-Op or Post-Op, and then Chart.

   –Or–
   On the keyboard, type ALT V, P, E (Pre-Op), ALT V, H, C (Holding), ALT V, I, C (Intra-Op), or ALT V, T, C (Post-Op).

   The section Chart appears. The grid is displayed in the upper part of the Chart (Figure 14-3).

	11:20	11:35	11:50	12:05	12:20	12:35	12:50	1:05	1:20	Total
❶ Glucose(mg/dL)	5									5
Ⓥ Hot(Degrees Farenhe	105									1
❶↕ neostigmine							1			1
❶↕ rocuronium	50			20(··)	10					80
❶ Insp. Isoflurane	0.2	0.3	0.5	0.4	0.5	0.6	0.6	0.0		
❶↕ acetaminophen(mcg/h	5	- - -	- - -	5/10	- - -	- - -	- - -	10/0		15
❶↓ Ringers Lactate					500	- - -	- - -	- - -		500
❶↕ sufentanil	10									10

Figure 14-3. Intra-Op Chart Grid - Vital Entry

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Rows that contain manual vital entries are indicated by the symbol **Ⓥ**. Each row of manual vital entries designates a unique manual vital and unit-of-measure combination. Entries for the same manual vital, but different units of measure, are in different rows.

Important: Cells within each row show individual lab test results entered during the time intervals specified in the column headers. If more than one result was entered in a given time interval, the last lab result entered is the one that's displayed in the cell on the grid. You can view all the entries made during that time interval by double-clicking the cell.

2. When you are ready to leave the Chart page, press another section or page tab.

Viewing Vital Entries on a Summary Page

The Summary pages in the Pre-Op, Holding Intra-Op and Post-Op sections contain lists of all manual vitals recorded, as well as the date and time of recording, unit of measure, value, totals, and artifacts.

Prerequisite

The case for which you are viewing information must be open.

Procedure

Follow these steps to view a list of manual vitals on a Summary page.

1. Press the Pre-Op, Holding, Intra-Op or Post-Op section tab at the bottom of the Recorder screen; then press the Summary tab.

–Or–
On the View menu, choose Pre-Op, Holding, Intra-Op or Post-Op, then Summary.

–Or–
On the keyboard, press ALT V, P, S (Pre-Op), ALT V, H, S (Holding), ALT V, I, S (Intra-Op), or ALT V, T, S (Post-Op).

The Summary page appears for the section you selected (Figure 14-4).
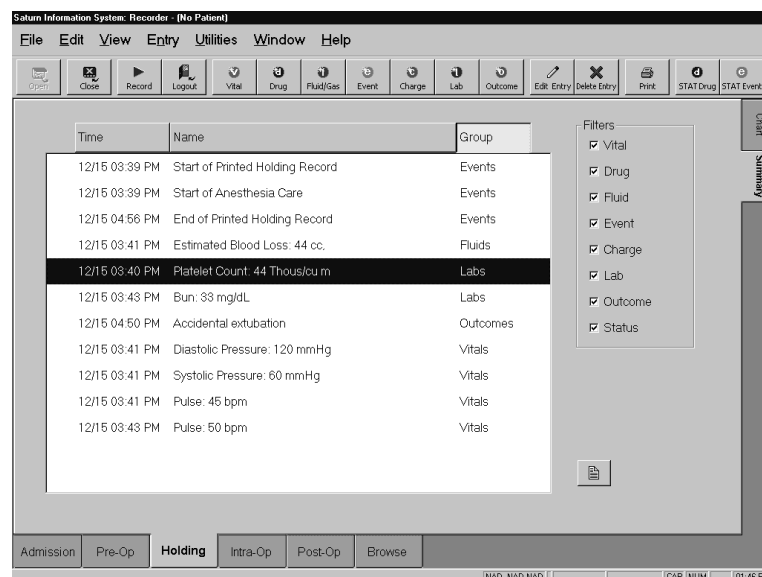
Figure 14-4. Holding Summary Page

2. You can change the order in which the list is sorted by pressing the column header by which you want to sort the list items.

   Example: To sort the list alphabetically by vital name, press the Name column header. To sort the list chronologically, press the Time column header.

3. To group the vital items together, do one of the following:

   • Click or press the Group header. Use the scroll bars to view vitals hidden from view.

   • Or, deselect every category in the Filters area (except for Vital) by clearing the check boxes. Only the vital entries appear in the window.

4. To view more information about a particular vital in the list, click it. The item's dialog box appears. When you are done viewing it, press OK or Cancel.

Editing Manual Vital Entries

You can edit vital entries on a Chart grid in the Pre-Op (Exam page), Holding, Intra-Op, or Post-Op section, or on a Summary page in the Pre-Op, Holding, Intra-Op, or Post-Op sections.

Editing Vital Entries on a Chart Grid

You can edit an existing manual vital from its cell in a Chart grid. You can also enter a new manual vital in an empty cell or add another vital to a vital you have already added to the case record. (To access a Chart grid, see "Viewing Vital Entries on a Chart Grid" on page 14-5.)

Prerequisite

The case for which you are editing information must be open.

Procedure

Follow these steps to edit an existing vital (or add a new vital to a cell in an existing vital entry) on a Chart grid.

Mouse Shortcut: In place of steps 1 and 2, double-click the cell you want to edit and proceed to step 3.

1. Select a cell on the Chart grid:

   • To edit an existing vital, select the cell that contains the entry. Then select the New Entry tab in the Vital Entry dialog box.

   • To enter a new vital, select the cell where the vital and time frame for the vital intersect.

   • To enter a new value at the current time, select the vital name in the grid.

2. On the toolbar, press the Edit Entry button.

   –Or–
   On the Edit menu, choose Edit Entry.

   The Manual Vital Entry dialog box appears with existing information about the selected manual vital recording entered (Figure 14-5 on page 14-8).

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Figure 14-5. Add Vital Entry Dialog Box

3. If the dialog box has several pages or tabs, press the tab that represents the vital entry you want to edit.

   Note: Tabs appear when the time interval you select on the grid contains several vital entries within that time interval.

4. Enter or change information about the vital. For details, see Table 14-1 on page 14-4.

   Note: Editing a cell by double-clicking it displays its associated entry dialog box with a time already entered. This time is entered in proportion to the part of the cell that is clicked. **Ensure that the automatically entered time reflects the actual time of the new or modified vital entry.**

5. When you are finished entering information, press the OK button to save it, or press Cancel to start over.

   The dialog box closes and the case record is updated with the information you entered. The Chart grid and the Summary page are also updated.

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Editing Vital Entries on a Summary Page

You can use the Summary pages in the Pre-Op, Holding, Intra-Op or Post-Op sections to edit any manual vital recording on the list, including the time, date, unit, value, and remarks.

Prerequisite

The case for which you are editing information must be open, and the Summary page tab where you want to edit a lab entry must be selected.

Procedure

Follow this procedure to edit a manual vital recording using the a Summary page. (To access the Summary pages, see "Viewing Vital Entries on a Summary Page" on page 14-6.)

Mouse Shortcut: In place of steps 1 and 2, you can double-click the cell you want to edit and proceed to step 3.

1. On a Summary page, select the manual vital you want to edit.

2. On the toolbar, press the Edit Entry button.

   –Or–
   On the Edit menu, choose Edit Entry.

   The Vitals Entry dialog box appears with information about the selected manual vital recording filled in (Figure 14-6).

Figure 14-6. Add Vital Entry Dialog Box

3. Enter change information as needed. For details, see Table 14-1 on page 14-4.

   Important: Editing a cell by double-clicking it displays the applicable entry dialog box with a time already entered. This time is entered in proportion to the part of the cell that is clicked. Ensure that the automatically entered time reflects the actual time of the new or modified manual vital entry.

4. When you are finished entering information, press the OK button to save it, or press Cancel to start over.

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The dialog box closes and the case record is updated. The Summary page is updated.

Deleting Manual Vital Entries

You can delete vital entries on a Chart grid in the Pre-Op (Exam page), Holding, Intra-Op, or Post-Op section, or a Summary page in the Pre-Op, Holding, Intra-Op, or Post-Op sections.

Deleting a Single Entry in a Cell on a Chart Grid

You can delete a single vital recording on a Chart grid in the Pre-Op (Exam page) Holding, Intra-Op and Post-Op sections.

Prerequisite

The case from which you are deleting information must be open.

Procedure

Follow these steps to delete a manual vital from its cell in a Chart grid:

1. On the Chart grid, select the cell that contains the vital entry you want to delete.

2. On the toolbar, press the Delete Entry button.

   –Or–
   On the Edit menu, choose Delete Entry.

   A confirmation message appears (Figure 14-7).
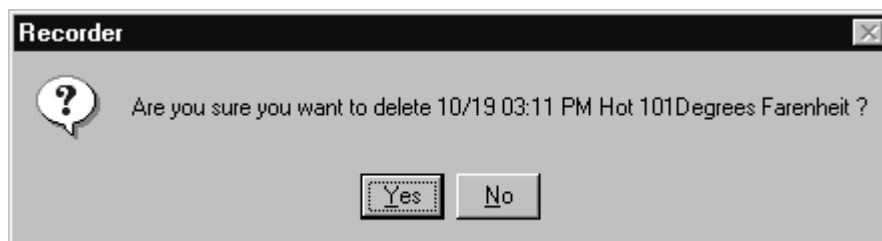
Figure 14-7. Single Entry Delete Dialog Box

3. Press the Yes button to delete the single vital entry

Deleting Multiple Entries in a Cell on a Chart Grid

You can delete several vital entries on a Chart grid in the Pre-Op (Exam page), Holding, Intra-Op and Post-Op sections.

Prerequisite

The case from which you are deleting information must be open.

Procedure

Follow these steps to delete one or more manual vital entries from a cell in the Chart grid:

1. On the Chart grid, select the cell that contains the entries you want to delete.

2. On the toolbar, press the Delete Entry button.

   –Or–
   On the Edit menu, choose Delete Entry.

   A dialog box containing a checklist of the entries in that cell appears (Figure 14-8).
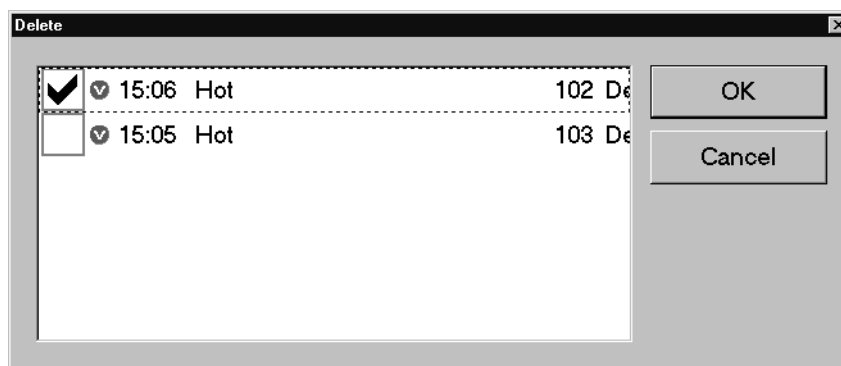
Figure 14-8. Multiple Entry Delete Dialog Box

3. Select the check boxes of the entries you want to delete, and then press the OK button to delete them.

Deleting All Entries in a Row on a Chart Grid

You can delete an entire row of vital entries on a Chart grid in the Pre-Op (Exam page), Holding, Intra-Op and Post-Op sections.

Prerequisite

The case from which you are deleting information must be open.

Procedure

Follow these steps to delete an entire row of entries on a Chart grid:

1. On the Chart grid, select the first cell in the row that you want to delete, which contains the name of the vital for which entries have been recorded in that row.

2. On the toolbar, press the Delete Entry button.

   –Or–
   On the Edit menu, choose Delete Entry.

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A confirmation message appears (Figure 14-9).

Figure 14-9. Row of Entries Delete Dialog Box

3. Press the Yes button to delete the row of entries.

Deleting Vital Entries on a Summary Page

You can delete vital entries on the Summary page of the Pre-Op, Holding, Intra-Op and Post-Op sections. Each vital entry appears as a separate entry on the Summary page.

Prerequisite

The case from which you are deleting information must be open.

Procedure

Follow this procedure to delete vital entries on a Summary page. (To access the Summary pages, see "Viewing Vital Entries on a Summary Page" on page 14-6.)

1. On the Summary page, select the vital entry you want to delete.

2. On the toolbar, press the Delete Entry button.

   –Or–
   On the Edit menu, choose Delete Entry.

   A confirmation message appears.
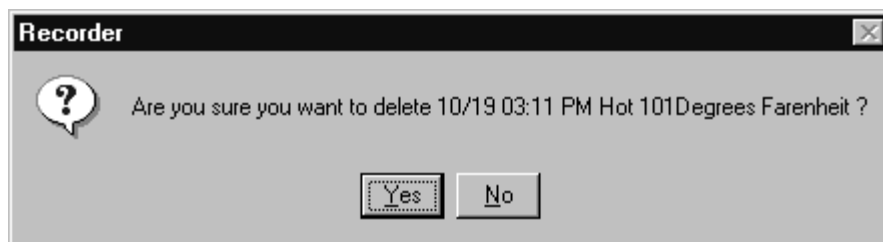
Figure 14-10. Single Entry Delete Dialog Box

3. Press the Yes button to delete the entry from the Summary page. It is also deleted from the Chart grid.

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15

Adding and Modifying Charge Entries

This section explains how to add, view, edit, and delete charges for items used during a case.

15 | Adding and Modifying Charge Entries

Adding Charge Entries

You can add information about charges incurred during a case from anywhere in Recorder.

Prerequisite   The case for which you are entering information must be open.

Procedure   Follow these steps to add an entry about one or more charges.

1. On the toolbar, press the Charge button.

   –Or–
   On the Entry menu, choose Charges.

   –Or–
   On the keyboard, press F8.

   The Add Charge Selection dialog box appears (Figure 15-1). It contains one or more pages. Each page contains a list of items from which you can make selections and enter information.

   The default page is *Template*, which contains a list of all of the charges that are available to you if you loaded an environment when you opened or created the case. The *All* page lists all charges that are available to you. Other pages appear after the *All* page (i.e., Anesthesia Charges, Hospital Charges, etc.) if your system administrator created these pages using the List Manager application or if you created them using the Environment Manager application. These other pages can contain lists of chargeable items that fall into categories that your system administrator and/or you choose and create.
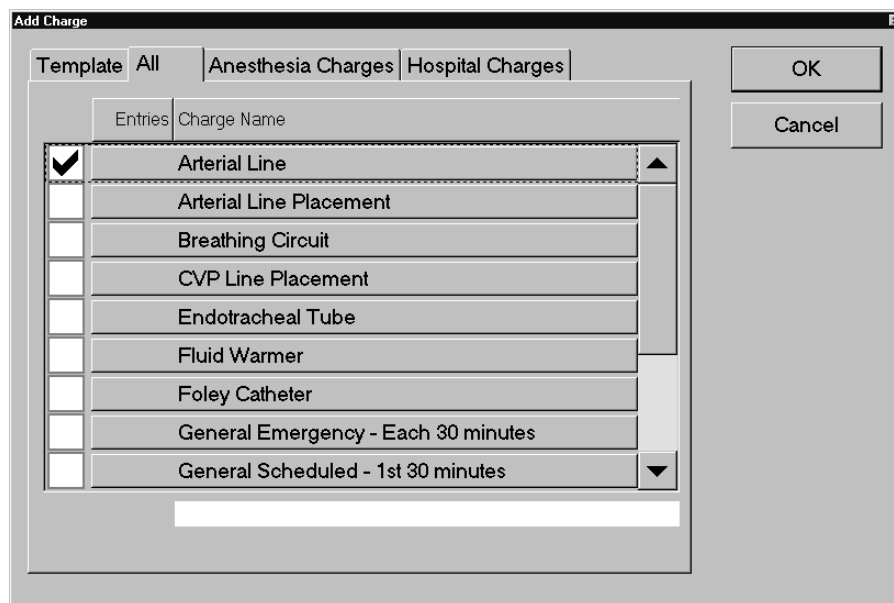
Figure 15-1. Add Charge Selection Dialog Box

Adding and Modifying Charge Entries | **15**

2. Select a page tab in the Add Charge Selection dialog box. You can change the order in which the list is sorted by pressing the column header you want to sort by.

   Example: To sort the list alphabetically by charge name, press the Charge Name column header. To sort the list to show which charges have already been entered, press the Entries header.

3. Select one or more charge item check boxes. The charge item(s) are placed on the Summary page of the Pre-Op, Holding, Intra-Op or Post-Op section for you to complete now or later.

   Note: The Electronic Signature dialog box may appear when adding a charge. Refer to "Electronic Signatures" on page 2-34 to enter a required signature.

4. Do one of the following:

   • If you checked only one item, click the item anywhere except in the check box. The item's Edit Entry dialog box appears (Figure 15-2).

   • If you checked several items, click OK. Now select the Summary page tab, and select an item you just entered. The item's Add Entry dialog box appears (Figure 15-2).

Figure 15-2. Add Entry Dialog Box (Charge)

5. Enter information about the charge item. For details, see Table 15-1 on page 15-4.

6. When finish, press the OK button to save the charge information, or press Cancel to exit the dialog box without saving it.

   Note: When you enter or change data, you may be required to enter your password. If the Enter Password dialog box appears, refer to "Password Restricted Data" on page 2-39.

   The dialog box closes and the information is added to the case record. The Summary page is updated.

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The following table describes the options in the Add Charge Entry dialog box.

Table 15-1. Charges Entry Dialog Box

Option	Description
Time	The time that the item is charged in *hh:mm* format. Leading zeros are not required. You can select the hours and minutes with the arrows, or enter them from the keyboard. Your system administrator determines whether your system will display 12- or 24-hour time. Valid values for 12-hour time are: 1 to 12 (hours) and minutes 0 to 59 (minutes). When 12-hour time is used, you must also select the AM or PM option button. Valid values for 24-hour time are: hours are from 1 to 24, and minutes are from 0 to 59. When 24-hour time is used, AM and PM option buttons do not appear. *Examples:* 12:00 AM for midnight (12-hour time) 12:00 PM for noon (12-hour time) 24:00 for midnight (24-hour time) 12:00 for noon (24-hour time) *Default:* For new item charge entries, the current time. For previous item charge entries, the last time entered.
Date	The date that the item is charged in *M/d/yy* or *yyyy.M.d* format, depending on the way in which your system administrator set up your system. Leading zeros are not required. You can select the date from a drop-down calendar or enter it from the keyboard. Refer to "Selection Calendars" on page 2-26. *Default:* For new item charge entries, the current date. For previous item charge entries, the last date entered.
Remarks	Any comment that you want to enter about the charged item (up to 2,048 characters). If you add remarks, a "paper icon" appears next to the item on the Summary page. Refer to "Attachment Buttons" on page 2-33 for more information. *Default:* None

Viewing Charge Entries

You can view charges that have been entered from the Summary pages in the Pre-Op, Holding, Intra-Op and Post-Op sections.

Prerequisite   The case for which you are viewing information must be open.

Procedure   Follow these steps to view a list of charges.

1. Press the Pre-Op, Holding, Intra-Op or Post-Op section tab at the bottom of the Recorder screen; then press the Summary tab.

   –Or–
   On the View menu, choose Pre-Op, Holding, Intra-Op, or Post-Op, then Summary.

   –Or–
   On the keyboard, press ALT V, P, S (Pre-Op), ALT V, H, S (Holding), ALT V, I, S (Intra-op), or ALT V, T, S (Post-Op).

   The Summary page appears (Figure 15-3). It lists items that are currently charged to the case.
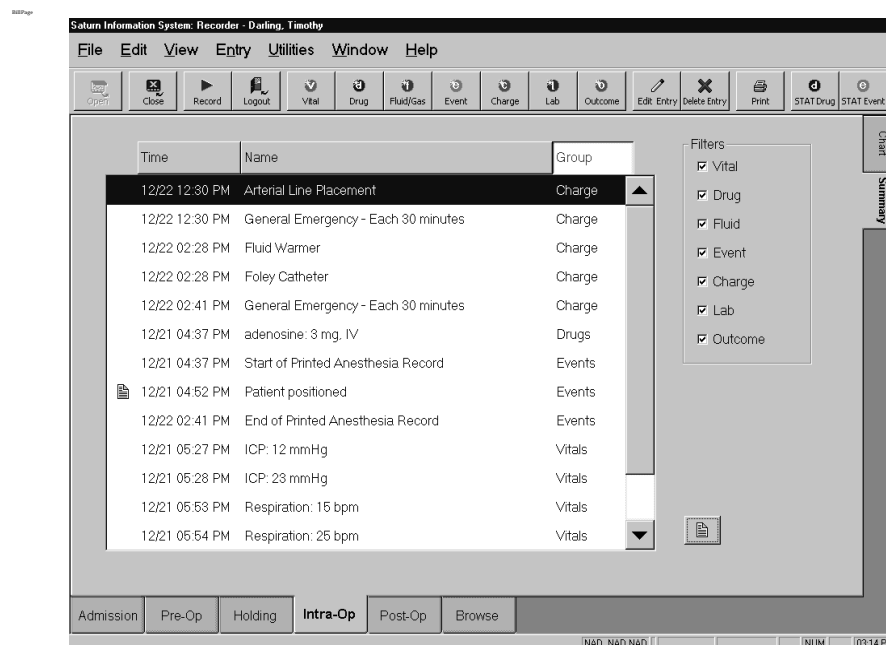
Figure 15-3. Intra-Op Summary Page

2. You can change the order in which the list is sorted by pressing the column header you want to sort by.

   Example: To sort the list alphabetically by fluid/gas name, press the Name column header. To sort the list chronologically, press the Time header.

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3. To group the charge items together, do one of the following:

   - Click or press the Group header. Use the scroll bars to view charges hidden from view.

   - Or, deselect every category in the Filters area (except for Charge) by clearing the check boxes. Only the charge entries appear in the window.

4. To view more information about a particular charge in the list, double-click it. The item's dialog box appears. When you are done viewing it, press OK or Cancel.

Editing Charge Entries

You can edit the time, date, and remarks associated with an item charge on a Summary page in the Pre-Op, Holding, Intra-Op or Post-Op section.

Prerequisite | The case for which you are editing information must be open.

Procedure | Follow this procedure to edit a charged item entry using the Summary pages. (To access the Summary pages, see "Viewing Charge Entries" on page 15-5.)

Mouse Shortcut: In place of step 1, double-click the charge item you want to edit and proceed to step 2.

1. On the Summary page (Figure 15-3 on page 15-5), select the charge item you want to edit.

2. Press the Edit Entry button on the toolbar.

   –Or–
   On the Edit menu, choose Edit Entry.

   The item's Edit Entry dialog box (Figure 15-4) appears with information about the selected charge filled in.

Figure 15-4. Edit Entry Dialog Box (Charge)

3. Enter or change information about the charge you are modifying. For details, see Table 15-1 on page 15-4. If you add remarks to it, a "paper" icon appears next to the item on the Summary page. Refer to "Attachment Buttons" on page 2-33 for more information.

4. When you are finished modifying information, press the OK button to save it, or press Cancel to start over. The dialog box closes. The case record and the Summary page are updated with the information you entered.

Deleting Charge Entries

You can delete charge entries on the Summary pages of the Pre-Op, Holding, Intra-Op or Post-Op sections.

Prerequisite   The case from which you are deleting information must be open.

Procedure   Follow these steps to delete an event on a Summary page. (To access the Summary pages, see "Viewing Charge Entries" on page 15-5.)

1. On the Summary page, select the charge item you want to delete.

2. Press the Delete Entry button on the toolbar.

   –Or–
   On the Edit menu, choose Delete Entry.

   A confirmation message appears.
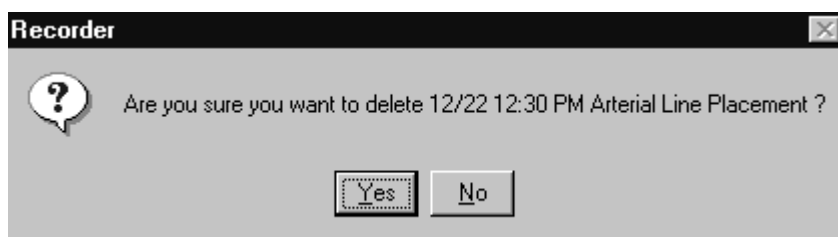

Figure 15-5. Single Entry Delete Dialog Box

3. Press Yes to delete the entry.

   The charge item is deleted from the case record and from the Summary page.

15 Adding and Modifying Charge Entries

Recorder User's Guide

16

Entering Postoperative Data

This section explains how to enter and view data collected after the patient leaves the operating room.

16 | Entering Postoperative Data

Entering Post-Op Data

The Post-Op section lets you create a complete record of postoperative data, such as the patient's vital signs and other postanesthetic conditions. Depending on the security rights configured by your system administrator, Post-Op users also have read-only or total access to data in the Admission section (see "Entering Admission Data" on page 5-2). The tabs remain dimmed for sections that have not been configured.

The Post-Op section is comprised of seven pages: Chart, Systems, Score (acuity measure), Assess, Checks, Discharge, and Summary. These pages can be selected by choosing the page tabs on the right side of the Recorder screen when the Post-Op section tab is selected.

If a "paper" icon appears next to an item in any window, it means there are additional comments attached to that item available for your review. Simply press the Attachment button to review the remarks. In addition, scroll bars appear in windows to accommodate viewing lists that are longer than the size of the window.

Before You Begin Recording

Your workstation may have been configured by the system administrator to "load an environment" for each case you record. If this is so, the data (automatic data, time scales, fluid balance, event bar, etc.) that will appear in the grid and graph areas of a Chart (Holding, Intra-Op and Post-Op) has been already selected. In addition, your system administrator has preselected any items that appear on the Score, Assess and Checks pages using the Environment Manager program.

However, if no environment is loaded, or no data has been pre-configured to appear in the grid and graph sections of a Chart, you must configure them for each case by selecting the Case View Settings option on the View menu. Score, Assess and Checks items are only available if an environment is loaded. Refer to "Changing General Display Parameters" on page 8-10 and the Environment Manager section of the "Saturn Administrator's Guide" for more information.

Prerequisites

- The case for which you want to enter or view postoperative information must be open.
- Post-Op must be selected in the Workstation Type list on the Utilities menu.

Procedure

Follow this procedure to enter or view postoperative data.

1. Press the Post-Op tab at the bottom of the Recorder screen, then press the Chart page tab.

    –Or–
    On the View menu, choose Post-Op, and then Chart.

    –Or–
    On the keyboard, press ALT, V, T, and then press ENTER.

    The Chart page of the Post-Op section appears ("Post-Op Section, Chart Page" on page 16-3).

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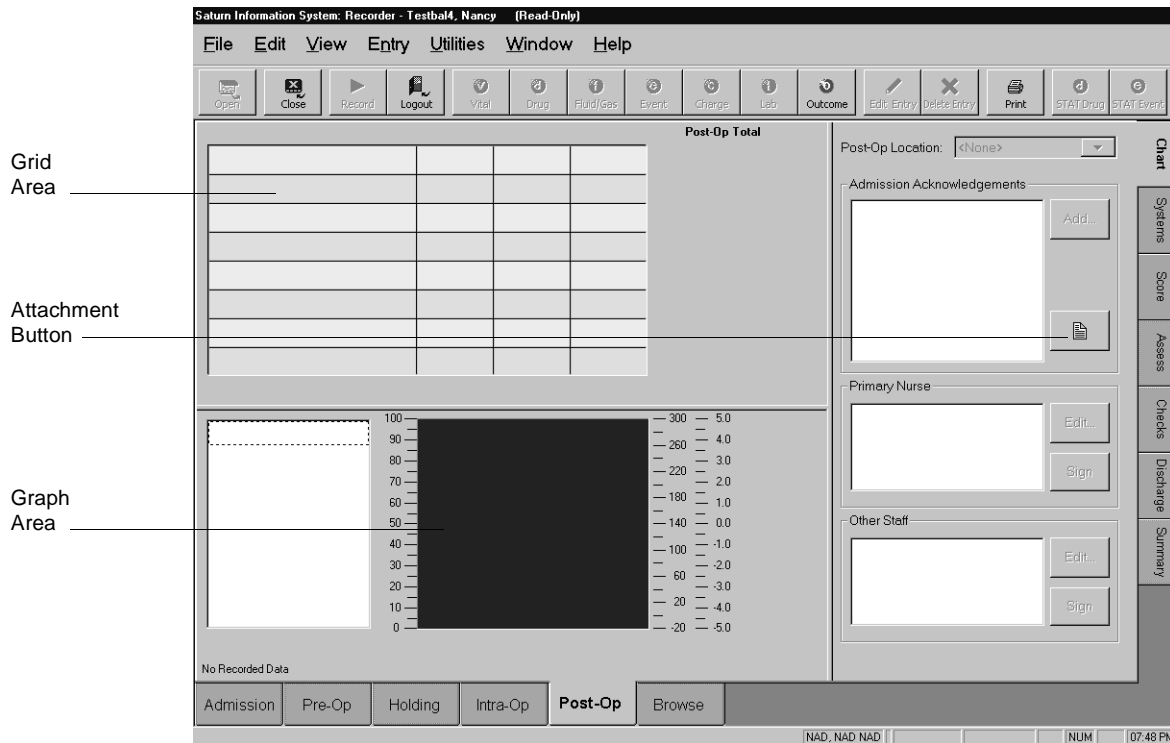
Figure 16-1. Post-Op Section, Chart Page

Chart

Besides entering postsurgical data, you can view the data automatically entered by the Saturn program (or entered manually by you) in the grid and graph areas of the page. Table 16-1 on page 16-6 defines the Chart page options.

Note: For more information about manipulating data on the Chart, refer to "Understanding the Chart" , "Interpreting Automatically Collected Data" , "Changing General Display Parameters" , and "Interacting with the Chart" in Section 8.

Prerequisite The case for which you want to enter or view postoperative information must be open and recording (if entering data), and the Post-Op section tab must be selected.

Procedure Follow this procedure to enter or view postoperative data.

1. Select the Chart tab. The Chart page appears (Figure 16-1 on page 16-3).

2. In the Post-Op Location box, select the down arrow and then choose the patient's location after surgery from the list.

3. In the Admission Acknowledgements area, press the Add button. The Add Acknowledgement dialog box appears (Figure 16-2).
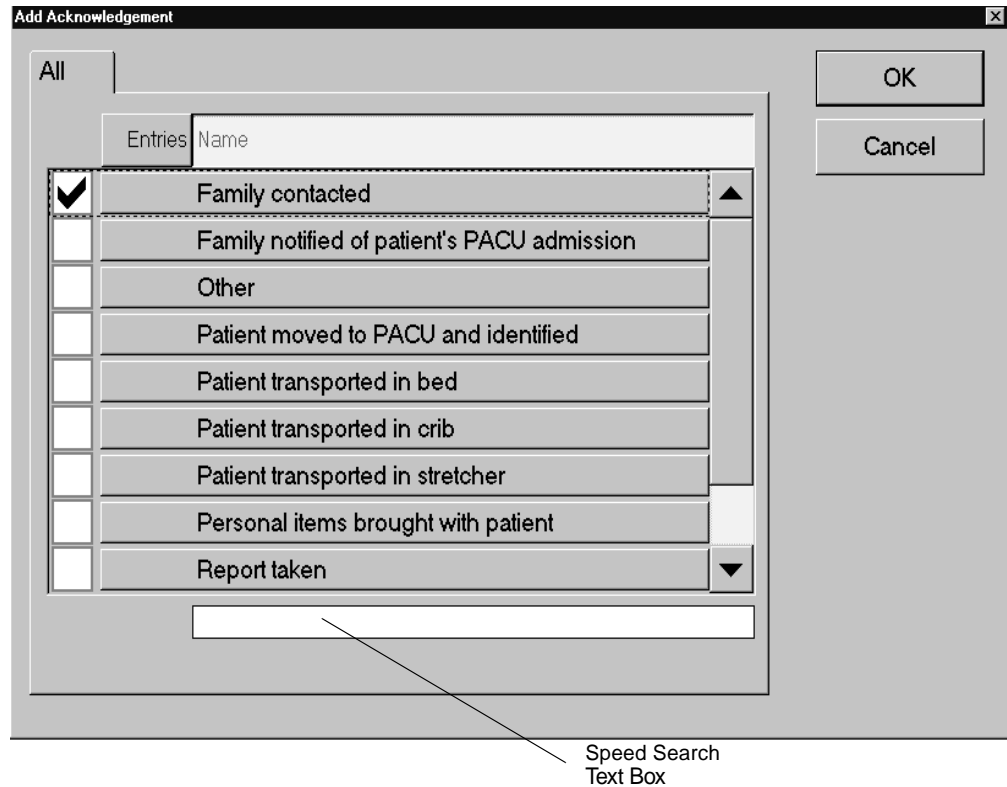
Figure 16-2. Add Acknowledgement Dialog Box

4. Select items from the list of options by doing one or more of the following:

- Select the Entries header to sort the list of items according to whether they've been previously selected. (Items previously selected appear at the top of the list with the number of times they were entered.) Then scroll through the list and click one or more check boxes to select items.

- Select the Name header to sort the list items alphabetically. Then scroll through the list and click one or more check boxes to select items.

- Type the letters of the item you want to find. The letters appear in the speed search text box. (There is no insertion point in this text box; just type the letters, and they will appear in the text box.) Entries beginning with the letters you typed are highlighted by a dashed line. Select the check boxes next to the items you want to add to the Admission Acknowledgement area.

5. Press the OK button when you finish making selections. The items appear in the Admission Acknowledgement area.

6. To add a comment to any of the items, refer to "Attachment Buttons" on page 2-33.

7. In the Primary Nurse area, press the Edit button. The Select Post-Op Primary Nurse Staff dialog appears (Figure 16-3).
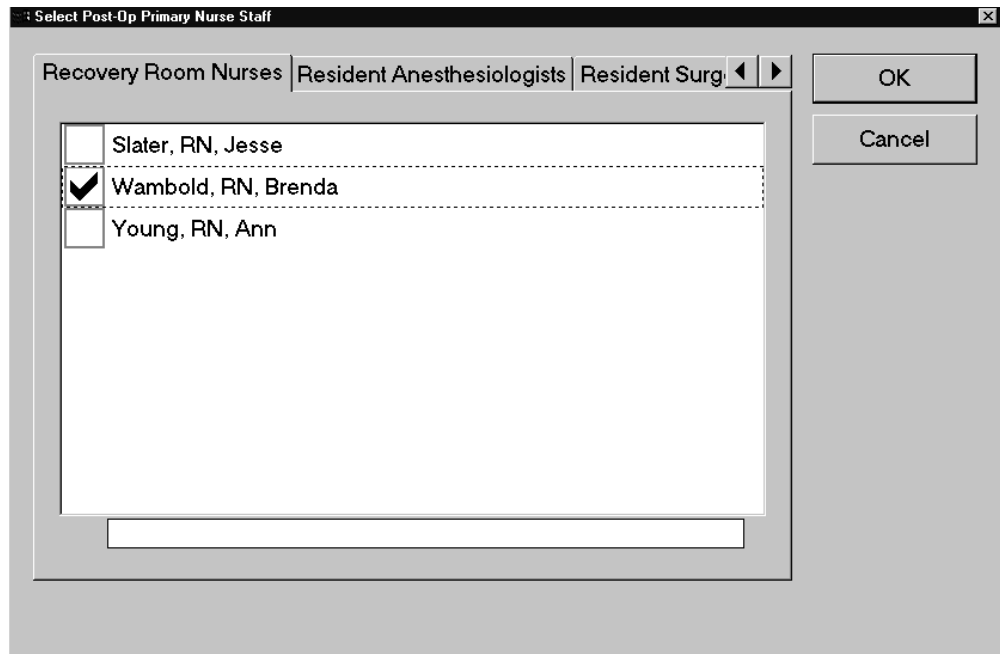
Figure 16-3. Select Post-Op Primary Nurse Staff Dialog Box

8. Select the staff name by clicking on the check box.

9. Press the OK button. (If an electronic signature dialog box appears, go to the next step.) The staff name appears in the Primary Nurse window.

10. If you need to enter an electronic signature for the staff name, select the name in the window and then press the Sign button. To enter an electronic signature, a staff person must have an assigned User Logon name and Password. Refer to "Electronic Signatures" on page 2-34 for more information.

11. To remove an item from the window, select it and press the DELETE key or the Delete Entry button on the toolbar.

   Note: A staff member who uses an electronic signature cannot be deleted from the case without entering the staff's password in the electronic signature dialog box.

12. Repeat steps 8 through 11 to enter staff in the Other Staff area.

13. To add, edit or delete vitals, drugs, fluids/gases, labs, events, charges and outcomes data, refer to the appropriate section of this manual.

16 | Entering Postoperative Data

Fluid Balance

The optional fluid balance grid can be displayed in the lower portion of the grid area on the Post-Op Chart by selecting the Fluid Balance check box on the Post-Op tab of the Case View Settings option on the View menu. The fluid balance and a perioperative balance are calculated. Refer to "Changing General Display Parameters" on page 8-10 for more information.

The fluid balance grid consists of four rows (all values are converted and displayed in milliliters (ml)):

- The first row displays the *fluid in* totals for the chart.
- The second row displays the *fluid out* totals for the chart.
- The third row displays the balance totals for the chart (*fluid in* minus *fluid out*)
- The fourth row displays the overall balance total.

Refer to the section "Adding and Modifying Fluid/Gas Entries" on page 11-1 for complete details.

Table 6-1 defines the Chart page options.

Table 16-1. Chart Options (Post-Op)

Option	Description
Grid Area	The grid area contains a grid that displays numerical case data in discrete blocks of time for the period of time that the patient is in the postoperative/recovery room area.
	You can enter Post-Op grid area items only if the case is recording and if your workstation is configured to be a Post-Op workstation. A triangle icon in the upper right corner of a grid cell means that remarks are attached to it. See "Grid Area" on page 8-3 for more information.
	Note: If the Fluid Balance option is selected from the Case View Settings option on the View menu, the grid appears in two sections. The bottom section of the grid reflects data related to fluid balance only. Refer to "Fluid Balance" on page 11-15 for further details.
Graph Area	The graph area displays graphical representations of automatically collected data from the time you start recording the case in the postoperative/recovery room area to the time the patient leaves the postoperative holding area. You can view Post-Op graph area items only if your workstation is configured to be a Post-Op workstation. See "Graphic Area" on page 8-6 for more information.
Post-Op Location	The recovery room or other location where the patient is transported after surgery.
	Default: None

Option	Description
Admission Acknowledge-ments	Acknowledgements regarding the patient (i.e., "Family contacted," "Patient transported in bed," "Report taken," etc.). You can add or delete acknowledgements. *Default:* None
Primary Nurse	The name(s) of the staff overseeing the patient after surgery. *Note:*The Sign button becomes active when you add a staff person. Refer to "Electronic Signatures" on page 2-34 for more information. *Default:* None
Other Staff	The names of other staff overseeing the patient after surgery. The Sign button becomes active when you add a staff person. Refer to "Electronic Signatures" on page 2-34 for more information. *Default:* None

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Systems

The Systems page (Figure 16-4) allows you to enter the results of a postoperative review of systems. (This page functions exactly like the Pre-Op Systems page.) The Systems page has six windows where you can add or delete patient data related to the patient's respiratory, hepato/gastrointestinal, cardiovascular, neuro/ musculoskeletal, renal/endocrine, and other patient systems after surgery. Each area has an Add button and an Attachment button (it looks like a "paper" icon). When you type remarks in a special text box when adding an item to a window, the item appears with the paper icon next to it. Table 16-2 on page 16-11 defines the Systems page options.

Prerequisites The case for which you want to enter or view postoperative information must be open and the Post-Op section tab must be selected.

Procedure Follow these steps to enter patient postoperative systems data.

1. Select the Systems page tab. The Systems page appears (Figure 16-4).
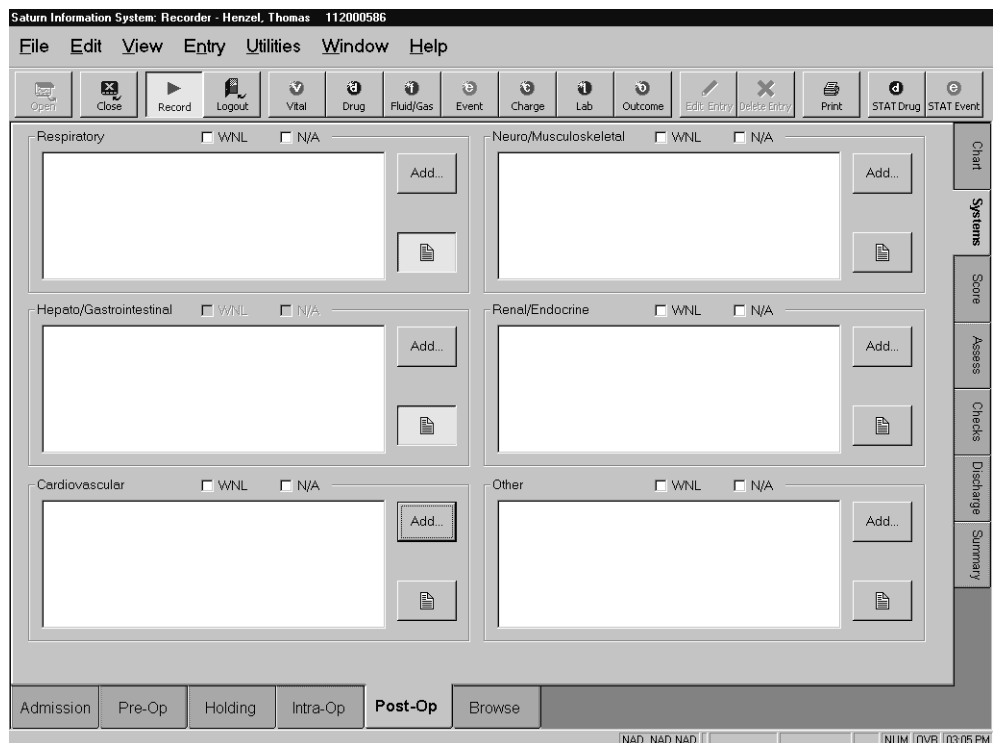
Figure 16-4. Post-Op Section, Systems Page

2. Press the Add button in any of the areas where you want to add systems data to the patient's case. The corresponding Add dialog box appears. The Add Respiratory dialog box is shown in Figure 16-5.

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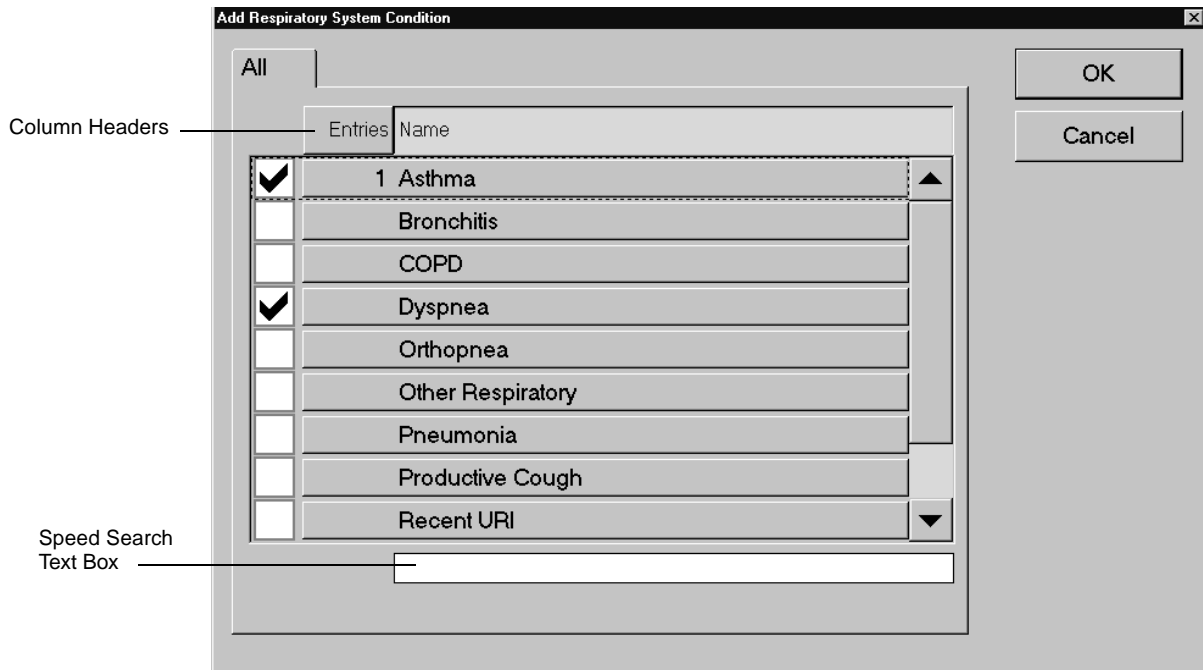
Figure 16-5. Add Respiratory System Condition Dialog Box

3. Select items from the list of options by doing one or more of the following:

    *   Select the Entries header to sort the list of items according to whether they have been selected previously. Then scroll through the list and click one or more check boxes to select items.

    *   Select the Name header to sort the list items alphabetically. Then scroll through the list and click check boxes to select items.

    *   Type the letters of the item you want to find; the letters appear in the speed search text box (Figure 16-5). Entries beginning with the letters you typed will appear. Select the check boxes next to the items you want to add to the patient's historical record.

4. Double-click an item to change its properties, or to add or change remarks. The corresponding item's Edit Entry dialog box appears (Figure 16-6).
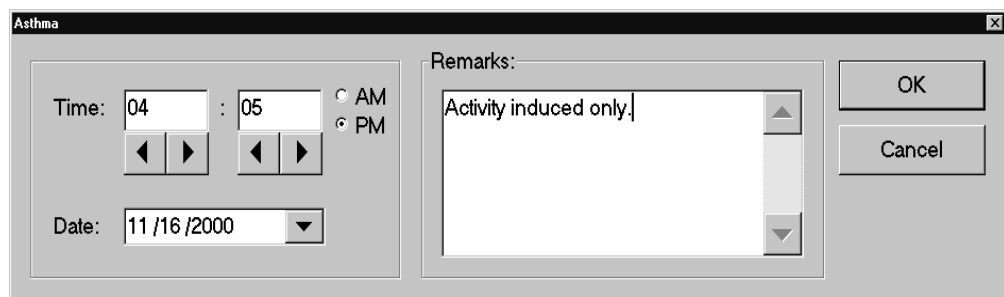
Figure 16-6. Edit Entry Dialog Box (Systems Page)

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5. Do one or more of the following:

  - Click the arrow keys in the Time boxes to change the time, then select the applicable AM or PM option button.

  - Place the pointer in the Date box and type in another date. Or, press the down arrow in the Date box. A calendar appears. Select a date on the calendar.

    Note: To select a date in a future month, click the arrow to the right of the calendar heading. To select a date in a previous month, click the arrow to the left of the calendar heading. The date you select now appears in the Date box.

  - Insert the pointer in the Remarks text box and type new text or delete existing text.

6. Press the OK button to keep the new information you have just entered, or press Cancel to start over.

7. To delete an entry, clear the check box by selecting it again. Or, highlight an item in a Systems page window and select the Delete Entry button on the toolbar.

The following table describes the Systems page options.

Table 16-2. Systems Page Options (Post-Op)

Option	Description
Respiratory	Indicates the postoperative respiratory condition of the patient (i.e., Asthma, Bronchitis, COPD, etc.). • Allows you to create a list, or add or delete conditions from the current list. • Allows you to view, add or change remarks typed in the Remarks text box of an Entry or other dialog box when the item is selected. • The WNL (within normal limits) box is checked if there are no items selected. N/A indicates not applicable.
Hepato/ Gastrointestinal	Indicates the postoperative hepato/gastrointestinal condition of the patient (i.e., Bowel Obstruction, Cirrhosis, Ulcers, etc.). • Allows you to create a list, or add or delete conditions from the current list. • Allows you to view, add or change remarks typed in the Remarks text box of an Entry or other dialog box when the item is selected. • The WNL (within normal limits) box is checked if there are no items selected. N/A indicates not applicable.
Cardiovascular	Indicates the postoperative cardiovascular condition of the patient (Angina, ASHD, CHF, etc.). • Allows you to create a list, or add or delete conditions from the current list. • Allows you to view, add or change remarks typed in the Remarks text box of an Entry or other dialog box when the item is selected. • The WNL (within normal limits) box is checked if there are no items selected. N/A indicates not applicable.
Neuro/ Musculoskeletal	Indicates the postoperative neuro/musculoskeletal condition of the patient (i.e., Arthritis, Back Problems, DJD, etc.). • Allows you to create a list, or add or delete conditions from the current list. • Allows you to view, add or change remarks typed in the Remarks text box of an Entry or other dialog box when the item is selected. • The WNL (within normal limits) box is checked if there are no items selected. N/A indicates not applicable.

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Table 16-2. Systems Page Options (Post-Op) (continued)

Option	Description
Renal/Endocrine	Indicates the postoperative renal/endocrine condition of the patient (Diabetes, Thyroid Disease, Urinary Retention, etc.). • Allows you to create a list, or add or delete conditions from the current list. • Allows you to view, add or change remarks typed in the Remarks text box of an Entry or other dialog box when the item is selected. • The WNL (within normal limits) box is checked if there are no items selected. N/A indicates not applicable.
Other	Indicates the postoperative respiratory condition of the patient (Anemia, Bleeding Tendencies, Cancer, etc.). • Allows you to create a list, or add or delete conditions from the current list. • Allows you to view, add or change remarks typed in the Remarks text box of an Entry or other dialog box when the item is selected. • WNL (within normal limits) box is checked if there are no items selected. N/A indicates not applicable.

Score

The Score page (Figure 16-7) allows nursing staff to record acuity measures for postoperative recovery scoring. Items that appear on this page are configured by your system administrator using the List Manager and Environment Manager programs. A score (i.e., Respiration, Circulation, etc.), as well as its entire row of entries, can be deleted.

Score items are loaded in a case through an environment configured in the Environment Manager program by your system administrator. (Refer to the Environment Manager section of the "Saturn Administrator's Guide" for more information.) Cases opened without first loading an environment will not display postoperative score items when the Score tab is selected.

Prerequisite The case for which you want to enter or view postoperative data must be open and recording (if entering data), and the Post-Op section tab must be selected.

Procedure Follow this procedure to enter and delete a patient's postoperative score data.

1. Press the Score page tab. The Score page appears (Figure 16-7).

Figure 16-7. Post-Op Section, Score Page

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2. Double-click or press an item in the grid; or, highlight it and press the Edit
   Entry button on the toolbar. The Add Score Entry dialog box associated with
   the scoring item appears (Figure 16-8).

Figure 16-8. Add Score Entry Dialog Box (Score Page)

3. Enter the time and date in the Time and Date boxes by typing the numbers on
   the keyboard. Or, use the arrow keys to obtain the time and date.

   Note: When you click on the arrow in the Date box, a calendar appears. Refer
   to "Selection Calendars" on page 2-26 for more information.

4. Select an item in the Status list box by clicking or pressing on the arrow key.

5. Type important notes and information in the Remarks text box (up to 2,048
   characters). A triangle icon appears in the upper right corner of a grid cell
   when you add remarks to a score entry.

6. When you are done, press OK. The score appears in the column that corre-
   sponds to the date and time entered in the dialog box in step 3. The score
   value associated with each status item is totaled for each column in the grid.

Assess

The Assess page (Figure 16-9) is provided to allow for recording of postoperative physical assessments. Items that appear on this page are configured by your system administrator using the List Manager and Environment Manager programs. An assessment (i.e., Breath sounds, EKG rhythm, etc.), as well as its entire row of entries, can be deleted.

Assessment items are loaded in a case through an environment configured in the Environment Manager program by your system administrator. (Refer to the Environment Manager section of the "Saturn Administrator's Guide" for more information.) Cases opened without first loading an environment will not display postoperative assessment items when the Assess tab is selected.

Prerequisite   The case for which you want to enter or view postoperative information must be open and the Post-Op section tab must be selected.

Procedure   Follow this procedure to enter patient postoperative assessment data.

1. Press the Assess page tab. The Assess page appears (Figure 16-9).

Figure 16-9. Post-Op Section, Assess Page

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2. Double-click or press an item in the grid, or select an assessment item and press the Edit Entry button on the toolbar. The Assessment Entry dialog box appears (Figure 16-10).

Figure 16-10. Assessment Entry Dialog Box, Assess Page

3. Do one or more of the following:

   • Click the arrow keys in the Time boxes to change the time, then select the applicable AM or PM option button.

   • Place the pointer in the Date box and type in another date. Or, press the down arrow in the Date box. A calendar appears. Select a date on the calendar.

     Note: To select a date in a future month, click the arrow to the right of the calendar heading. To select a date in a previous month, click the arrow to the left of the calendar heading. The date you select now appears in the Date box.

   • Select an item in the Status box by pressing on the arrow.

   • Type important notes and information in the Remarks text box (up to 2,048 characters). A triangle icon appears in the upper right corner of a grid cell when you add remarks to an assessment entry.

4. Press the OK button to keep the new information you have just entered, or press Cancel to start over.

5. Repeat steps 1 through 4 for each assessment item you are documenting. Use the scroll bar on the right side of the Recorder screen to view items that are hidden from view.

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Checks

The Checks page (Figure 16-11) is an extension of the assessment process, where nurses can document the results of specific recovery assessments. Items that appear on this page are configured by your system administrator using the List Manager and Environment Manager programs. A check (i.e., Pulse Right Radial, Color Left UE, etc.), as well as its entire row of entries, can be deleted. Refer to the Environment Manager section of the "Saturn Administrator's Guide" for more information.

Checks items are loaded in a case through an environment configured in the Environment Manager program by your system administrator. (Refer to the Environment Manager section of the "Saturn Administrator's Guide" for more information.) Cases opened without first loading an environment will not display postoperative checks items when the Check tab is selected.

Prerequisites   The case for which you want to enter or view postoperative information must be open and recording (if entering data), and the Post-Op section tab must be selected.

Procedure   Follow this procedure to enter patient postoperative checks data.

1. Press the Checks page tab. The Checks page appears (Figure 16-11).

Figure 16-11. Post-Op Section, Checks Page

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2. Select a checks item, and then press the Edit Entry button on the toolbar. The Checks Entry dialog box appears.
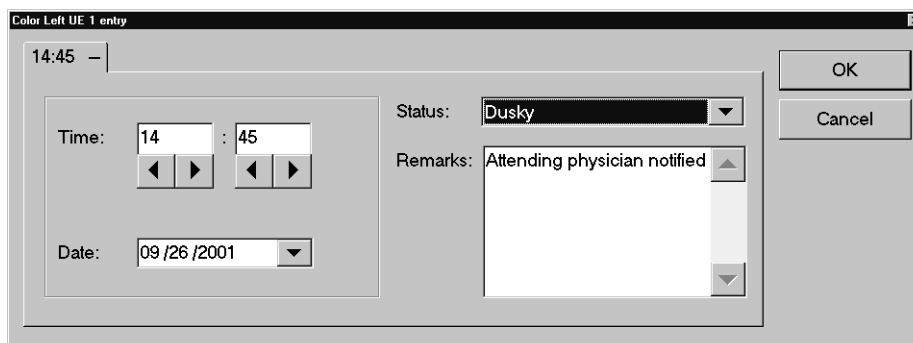
Figure 16-12. Checks Entry Dialog Box, Checks Page

3. Do one or more of the following:

    •   Click the arrows in the Time boxes to change the time, then select the applicable AM or PM option button.

    •   Place the pointer in the Date box and type in another date. Or, press the down arrow in the Date box. A calendar appears. Select a date on the calendar.

        Note: To select a date in a future month, click the arrow to the right of the calendar heading. To select a date in a previous month, click the arrow to the left of the calendar heading. The date you select now appears in the Date box.

    •   Select an item in the Status box by pressing on the arrow key.

    •   Type important notes and information in the Remarks text box (up to 2,048 characters). A triangle icon appears in the upper right corner of a grid cell when you add remarks to a checks item.

4. Press the OK button to keep the new information you have just entered, or press Cancel to start over.

5. Repeat steps 1 through 3 for each check item you are documenting. Use the scroll bar on the right side of the Recorder screen to view items that are hidden from view.

Discharge

The Discharge page (Figure 16-13) allows you to document the discharge process, including continuation of care, any special instructions, the level of the patient's awareness, and the staff members involved in the discharge process. An Attachment button appears in several windows. This allows you to view comments or remarks that are "attached" to an item. You can tell if an attachment has been entered already because you will see a "paper" icon next to the item in the window. Table 16-3 on page 16-22 defines the Discharge page options.

Prerequisite   The case for which you want to enter or view postoperative information must be open and the Post-Op section tab must be selected.

Procedure   Follow this procedure to enter patient postoperative discharge data.

1. Press the Discharge page tab. The Discharge page appears (Figure 16-13).

Figure 16-13. Post-Op Section, Discharge Page

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2. In the Evaluation of Plan of Care area, the Instruct Family/Patient In area, or the Transfer Summary area, select the Add button. The corresponding Add Discharge dialog box appears. The Add Discharge Evaluation dialog box is shown in Figure 16-14.
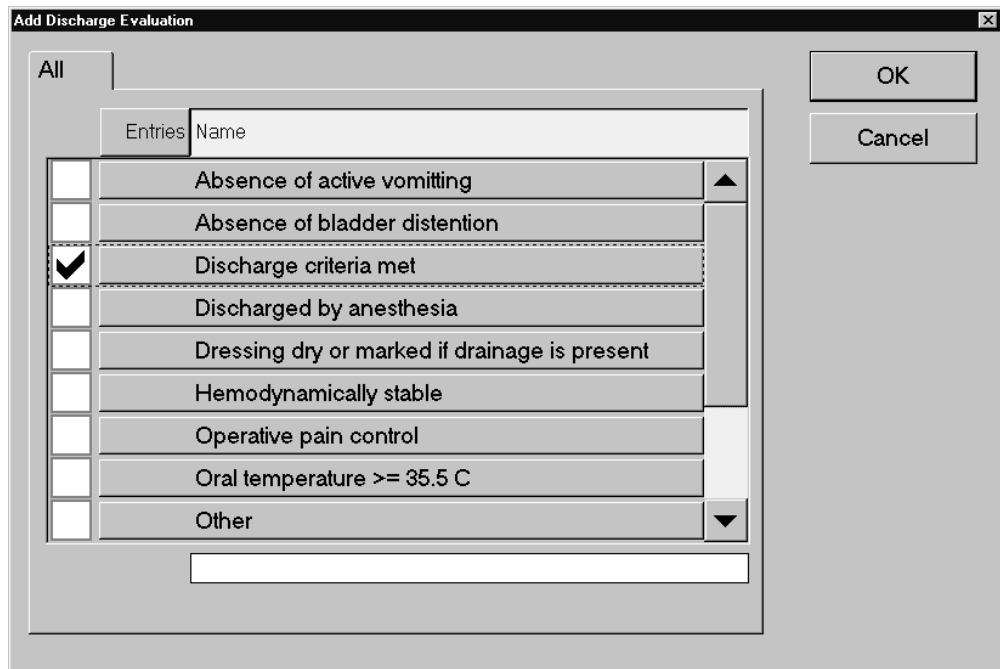
Figure 16-14. Add Discharge Evaluation Dialog Box, Discharge Page

3. Select items from the list of options by doing one or more of the following:

- Select the Entries header to sort the list of items according to whether they've been previously selected. (Items previously selected appear at the top of the list with the number of times they were entered.) Then scroll through the list and click one or more check boxes to select items.

- Select the Name header to sort the list items alphabetically. Then scroll through the list and click one or more check boxes to select items.

- Type the letters of the item you want to find. The letters appear in the speed search text box. Entries beginning with the letters you typed are highlighted by a dashed line. Select the check boxes next to the items you want to add.

4. Press the OK button when you finish making selections. The items appear in the window. Or, press the Cancel button to start over.

5. To create an attachment to an item, refer to "Attachment Buttons" on page 2-33.

6. To delete an entry, clear the check box by selecting it again. Or, highlight an item in a window on the Discharge page and then select the Delete Entry button on the toolbar.

7. In the Staff area (Discharged by Order Of, Transported By, or Received By), press an Edit button. The corresponding staff dialog box appears. The All page in the Select Post-Op Discharge Staff dialog box is shown in Figure 16-15.
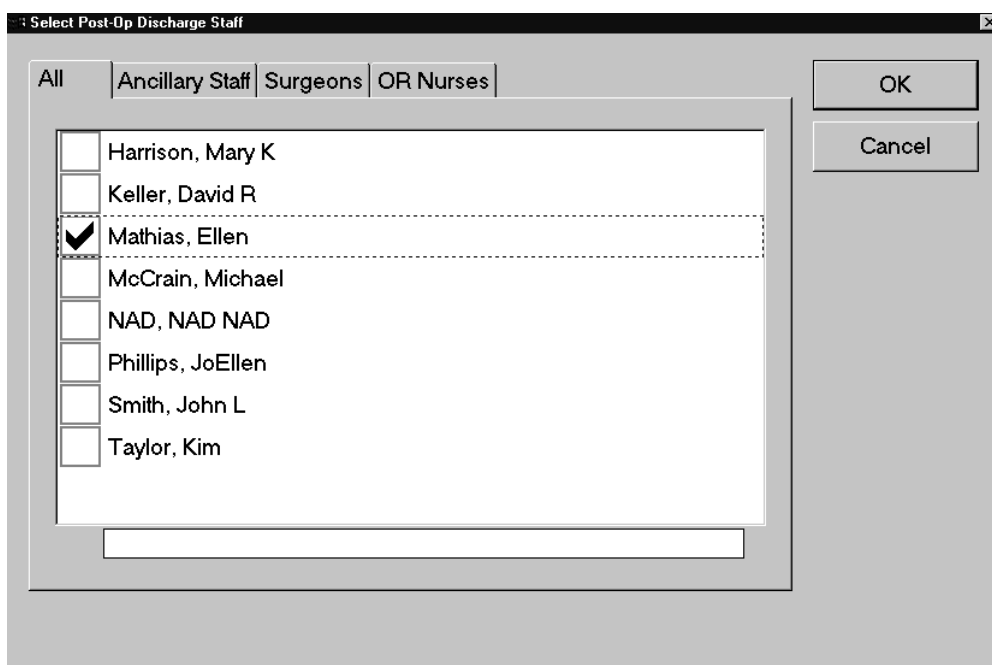
Figure 16-15. Select Post-Op Discharge Staff Dialog Box, Discharge Page

8. Select the staff assigned to the case, and then press OK. The staff name(s) appear in the window. Or, press Cancel to start over.

9. If the Sign button is enabled, you may enter an electronic signature for each staff you choose. Refer to "Electronic Signatures" on page 2-34 for more information.

10. To delete an entry, clear the check box by selecting it again. Or, highlight an item in a Discharge page window, then select the Delete Entry button on the toolbar.

> *Important:* Staff who use an electronic signature cannot be deleted from the case without entering the staff's password in the electronic signature dialog box.

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Table 16-3. Discharge Page Options (Post-Op)

Option	Description
Evaluation of Plan of Care	List items regarding the postanesthesia evaluation of patient care (i.e., Operative pain control, Skin is dry and warm, etc.). • Allows you to create a list, or add or delete selections from the current list. • Allows you to view, add or change remarks typed in the Remarks text box of an Entry or other dialog box when the item is selected.
Instruct Family/Patient In	List items regarding the postanesthesia instructions for the family/patient (i.e., Pain Management, Correct Positioning, etc.). • Allows you to create a list, or add or delete selections from the current list. • Allows you to view, add or change remarks typed in the Remarks text box of an Entry or other dialog box when the item is selected.
Transfer Summary	List items regarding the postanesthesia patient transfer summary (i.e., Patient is conscious and responsive, Patient is oriented, etc.). • Allows you to create a list, or add or delete selections from the current list. • Allows you to view, add or change remarks typed in the Remarks text box of an Entry or other dialog box when the item is selected.
Staff Area:	
Discharged by Order of	The attending staff who has authorized the patient's discharge. • Use the Edit Entry button to select staff. • Use the Sign button to enter an electronic signature for the staff. *Note:* The Sign button becomes active when you add a staff person. Refer to "Electronic Signatures" on page 2-34 for more information.
Transported by	The staff who has transported the patient to the discharge area. • Use the Edit Entry button to select staff. • Use the Sign button to enter an electronic signature for the staff. *Note:* The Sign button becomes active when you add a staff person. Refer to "Electronic Signatures" on page 2-34 for more information.

Table 16-3. Discharge Page Options (Post-Op) (continued)

Option	Description
Received by	The receiving staff person(s). Use the Edit button to select staff. Use the Sign button to enter an electronic signature for the staff. *Note:* The Sign button becomes active when you add a staff person. Refer to "Electronic Signatures" on page 2-34 for more information.

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Summary

The Summary tab (Figure 16-6) allows you to view a summary of manually entered data gathered during the postoperative period. The Filters area of the screen lets you limit the list of data in the window by clearing the check boxes of the data sets you do not want included. As many check boxes can be selected as you like. See Table 16-4 on page 16-26 for a description of options on the Summary page.

Prerequisite The case for which you want to enter or view postoperative information must be open, and the Post-Op section tab must be selected.

Procedure Follow this procedure to view and edit patient summary data.

1. Press the Summary tab. The Summary page appears (Figure 16-6).
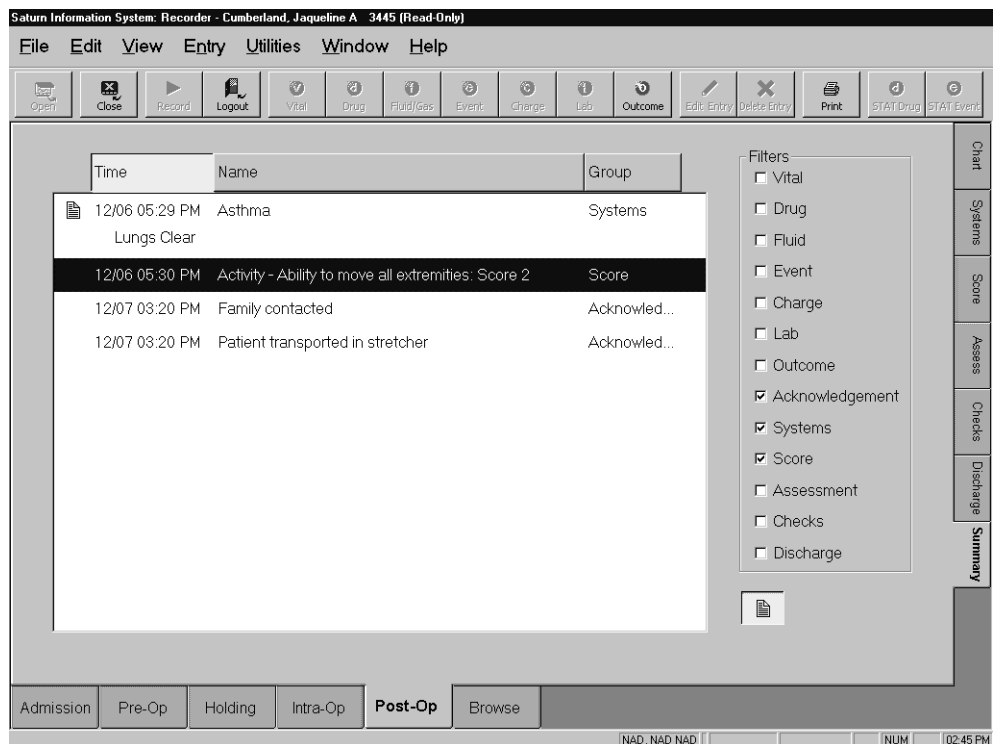
Figure 16-16. Post-Op Section, Summary Page

2. In the Filters area, select one or more categories of data to be viewed (Vitals, Drugs, etc.) by selecting the check boxes. Select as many categories as you want. To clear a check box, click it again; the check is removed.

   Example: Figure 16-16 shows a list of all acknowledgement, systems and score data in the case so far. To view other data as well, select more check boxes. To view a single category of data, clear all the check boxes except the one you want listed in the window.

3. To sort the data in the window, do one or more of the following:

   • Click the Time header to list the items chronologically.

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- Click the Name header to list the items alphabetically.

- Click the Group header to list the items according to their category or group (vitals, drugs, fluids, etc.).

4. To change only the time of an entry, see step 4 under "Summary" on page 6-23.

5. To change any of an item's properties (time, date or attachment contents), double-click the item. The item's Edit Entry dialog box appears (Figure 16-17).

Figure 16-17. Edit Entry Dialog Box

6. Do one or more of the following:

- Click the arrow keys beneath the Time boxes to change the time, as well as the applicable AM or PM option button.

- Place the pointer in the Date box and type in another date. Or, press the down arrow in the Date box. A calendar appears. Select a date on the calendar.

    Note: To select a date in a future month, click the arrow to the right of the calendar heading. To select a date in a previous month, click the arrow to the left of the calendar heading. The date you select appears in the Date box.

- Insert the pointer in the Remarks text box and type new text or delete existing text.

7. Press the OK button to keep the new information you have just entered, or press Cancel to start over.

8. To view the contents of an attachment, press the Attachment button below the Filters area on the screen. The contents of all attachments are displayed for viewing. To hide the contents, click or press the Attachment button again. Refer to "Attachment Buttons" on page 2-33 for more information.

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The following table describes the Summary page options in the Post-Op section.

Note: There are defaults only for the Filters area on the Summary page.

Table 16-4. Summary Page Options (Post-Op)

Option	Description
Time	The time entered by the user for an item. • Clicking or pressing on the Time header arranges items chronologically. • Clicking on the date/time of an item in the window displays right and left arrows which you can press to modify the time. • Double-clicking an item in the window allows you to change its properties (time, date, remarks) in the properties dialog box.
Name	The name of an item in a particular category, such as acetaminophen (Drug), Anesthetic induction (Event), etc. • Clicking or pressing on the Name header arranges items alphabetically. • Double-clicking an item in the window allows you to change its properties (time, date, remarks) in the properties dialog box.
Group	The category or data set to which items belong. These categories are listed in the Filters area of the screen. • Clicking or pressing on the Group header arranges items by category. • Double-clicking an item in the window allows you to change its properties (time, date, remarks) in the properties dialog box.
Filters	Contains the categories of data that you can summarize and view in the Summary page window. Choices include Vital, Drug, Fluid, Event, Charge, Lab, Outcome, Acknowledgement, Systems, Score, Assessment, Checks, and Discharge. • You can view one or several categories at once by selecting one or more check boxes. • Clear or deselect a check box to limit a category, which disallows its items from being displayed in the window. *Defaults:* Drug and Event items
Vital	When you select the Vital check box, a list of vitals information is displayed.
Drug	When you select the Drug check box, a list of medication information is displayed.
Fluid	When you select the Fluid check box, a list of fluid and/or gas information is displayed.

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Table 16-4. Summary Page Options (Post-Op) (continued)

Option	Description
Event	When you select the Event check box, a list of events is displayed. Events can have attachments. Refer to "Attachment Buttons" on page 2-33 for more information.
Charge	When you select the Charge check box, a list of hospital charges is displayed. Refer to "Attachment Buttons" on page 2-33 for more information.
Lab	When you select the Lab check box, a list of labs is displayed. Refer to "Attachment Buttons" on page 2-33 for more information.
Outcome	When you select the Outcome check box, a list of outcome information is displayed. Refer to "Attachment Buttons" on page 2-33 for more information.
Acknowledge-ment	When you select the Acknowledgement check box, a list of acknowledgements that you entered on the Chart page appears. If there are attachments containing important notes about an Acknowledgement item, a "paper" icon will appear next to it in the window. See the Attachment Button below for further information.
Systems	When you select the Systems check box, a list of patient systems data that you entered on the Systems page is displayed. If there are attachments containing important notes about a Systems item, a "paper" icon will appear next to it in the window. See the Attachment Button below for further information.
Score	When you select the Score check box, a list of data that you entered on the Score page is displayed.
Assessment	When you select the Assessment check box, a list of data that you entered on the Assess page is displayed. Refer to "Attachment Buttons" on page 2-33 for more information.
Checks	When you select the Checks check box, a list of data that you entered on the Checks page is displayed.
Discharge	When you select the Discharge check box, a list of data that you entered on the Discharge page is displayed. • The Group name for these discharge items appear as either Evaluation, Instruction or Transfer. • If there are attachments containing important notes about a discharge item, a "paper" icon will appear next to it in the window. See the Attachment Button below for further information.

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Table 16-4. Summary Page Options (Post-Op) (continued)

Option	Description
Attachment Button	Located below the Filters area on the Summary page, the Attachment button allows you to view comments of any item listed in the window that has a "paper" icon next it. Press the Attachment button; the contents of all attachments are displayed. Press the Attachment button again to remove the contents from view. Refer to "Attachment Buttons" on page 2-33.

17

Using the Browse Section

This section explains how to use the Browse section of Recorder to access the Internet and a hospital intranet.

Using the Browse Section

Use the Browse section of Recorder to access Web pages and Web sites on the Internet and on a hospital intranet. Microsoft Internet Explorer *version 5.x* is required.

Note: Saturn's implementation of the Microsoft Internet Explorer browser does not support Web sites that automatically launch multiple Internet Explorer sessions where information is exchanged between those sessions.

Prerequisite   A case must be open in order for you to use the Browse section.

You must have Browse rights, which are assigned by your Saturn Administrator.

Procedure   Follow this procedure to use the Browse section.

1. Press the Browse tab at the bottom of the Recorder window.

   –Or–
   On the View menu, choose Browse.

   –Or–
   On the keyboard, press ALT, V, B.

   The Browse section appears (Figure 17-1).

   Use the Browse section as you would use the Microsoft Internet Explorer Internet engine.
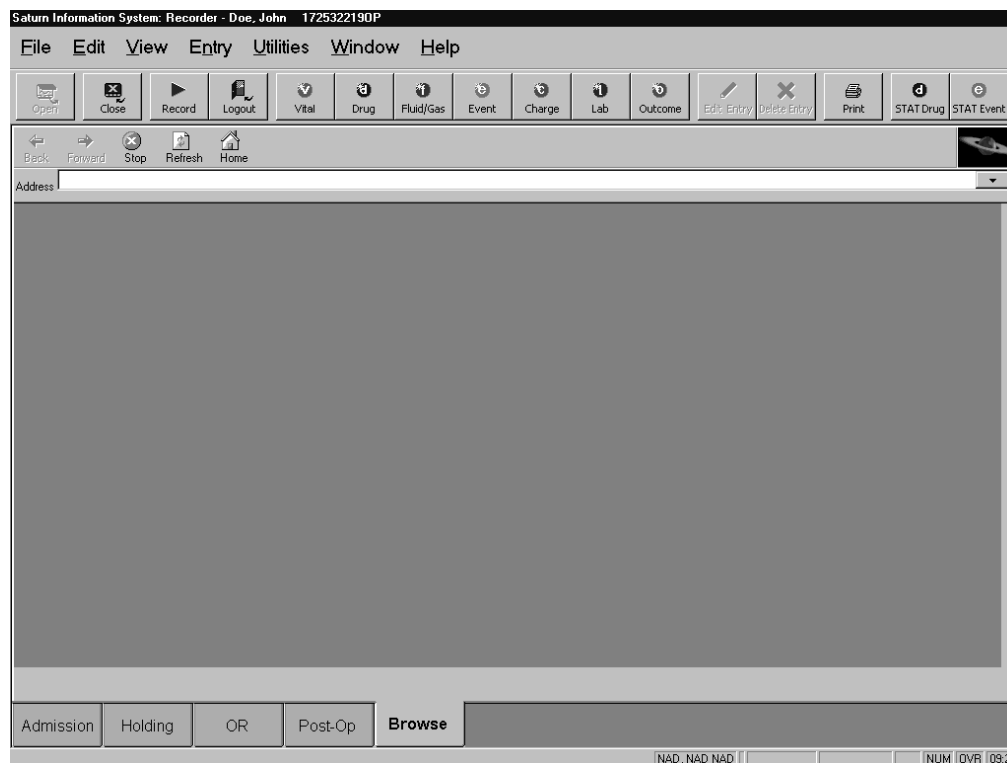
Figure 17-1. Browse Section

2. Enter a URL (universal resource locator) in the URL address window. The Web site or Web page of the URL that you entered appears (Figure 17-2).

Figure 17-2. Browse Section Displaying A Web Site (Example)

Internet Options

Follow this procedure to configure the Browse Internet options on your workstation.

Note: You can configure the Browse Internet options on your workstation only if your Saturn Administrator has given you Browse and Workstation Configuration access rights.

1. From the Utilities menu, choose Workstation Configuration.

   The Workstation Configuration dialog box is displayed with the General page on top (Figure 17-3 on page 17-4).

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ConfigWorkOnly
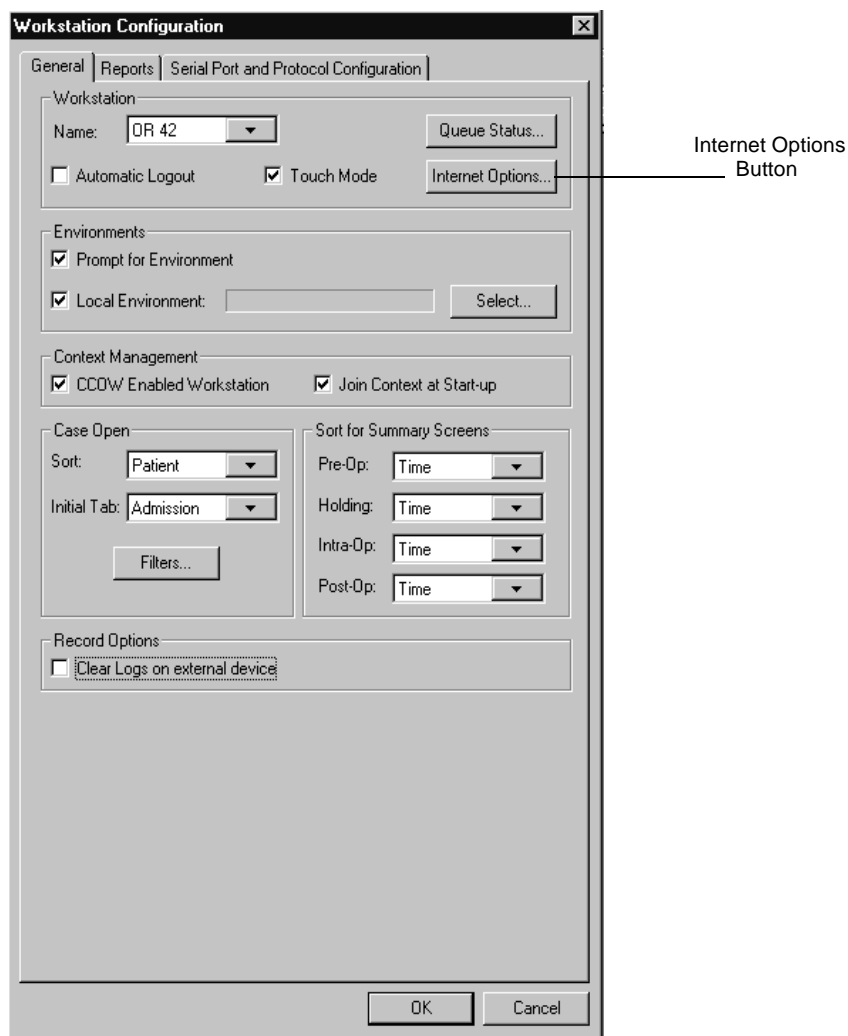
Figure 17-3. Workstation Configuration Dialog Box—General Page

2. **Select the Internet Options... button (Figure 17-3).**

   The Internet Properties dialog box appears (Figure 17-4 on page 17-5). Use this dialog box and its various sections to configure your workstation's Internet options.

Figure 17-4. Internet Properties Dialog Box

17 | Using the Browse Section

Recorder User's Guide

18

CCOW Patient Context Manager

This section explains how to use the CCOW Patient Context Manager.

18 | CCOW Patient Context Manager

CCOW Patient Context Manager

The CCOW[1] Patient Context Manager allows you to use the Recorder application in collaboration with other applications in your health care environment. When the CCOW feature is enabled in Saturn and in other applications — and a patient case is open in Saturn — the same patient's record is opened automatically in the other applications. (This includes Web applications, which are accessed through the Browse tab on a clinical workstation.)

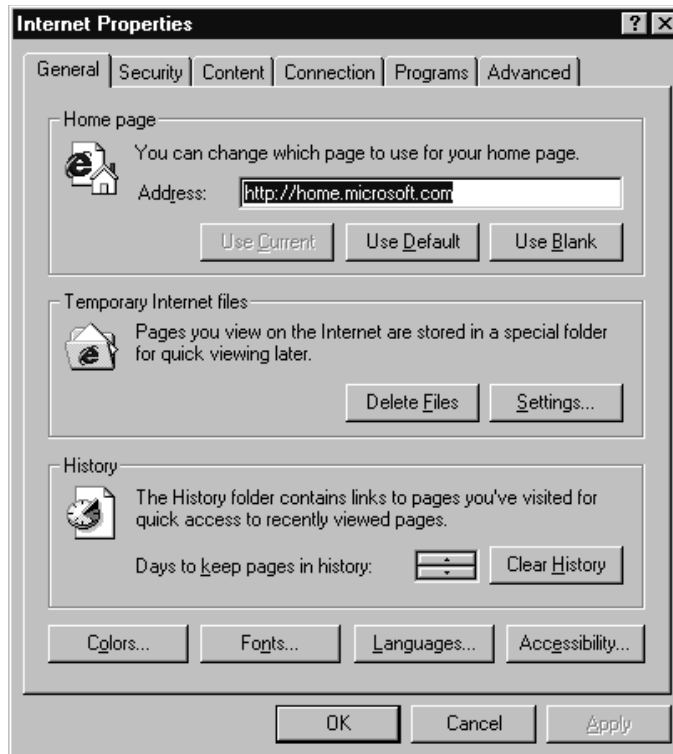For example, you may open a patient case by the name of John Doe in the Saturn Recorder program. Meanwhile a CCOW-enabled lab result program is also open on the desktop. When the CCOW feature is enabled, John Doe's lab records are opened up when you access the lab application.

Note: If John Doe's medical record number is used to identify his records in Saturn and the other CCOW-enabled programs, his record in these programs is automatically opened when you enable CCOW. If a medical record number is not assigned to the patient case or record in a given program, a patient clinical context cannot be attained in that program.

CCOW runs differently on clinical and nonclinical workstations:

- On nonclinical workstations, you can open 10 patient cases at a time. On a clinical workstation, only one case can be open at a time. Whichever case is current (i.e., the case that appears on the screen that contains the cursor insertion point) is the patient record that CCOW opens in the other programs.

- On nonclinical workstations, patient "switching" is allowed. For example, if you open a patient record in a program other than Recorder, that patient's most recent record (i.e., case) will have been opened by Saturn when you return to the Recorder Case window. On clinical workstations, patient switching is not allowed.

- When you log on to a nonclinical workstation, you can automatically retrieve the last case in a clinical context on the desktop. When you log on to a clinical workstation, you cannot retrieve the last case in context.

- On nonclinical workstations, CCOW-enabled applications other than Recorder can be opened on the desktop. On clinical workstations, they are accessed using the Browse section tab.

---

1. Clinical Context Object Workgroup

Configuring CCOW   The CCOW Patient Context Manager for Saturn is configured on the General page of the Workstation Configuration option on the Utilities menu.

Prerequisite   Your health care organization must have a Draeger-approved CCOW program.

Procedure   Follow these steps to configure a workstation with the CCOW Patient Context Manager.

1. On the Utilities menu, select Workstation Configuration. The General page of the Workstation Configuration dialog box appears (Figure 18-1).

2. In the Context Management area of the General page, select the CCOW Enabled Workstation check box.

3. Next, select the Join Context at Start-up check box to connect the workstation to the Patient Context Manager each time this workstation is started or restarted.

    Note: This check box is unavailable unless you checked CCOW Enabled Workstation in step 2.
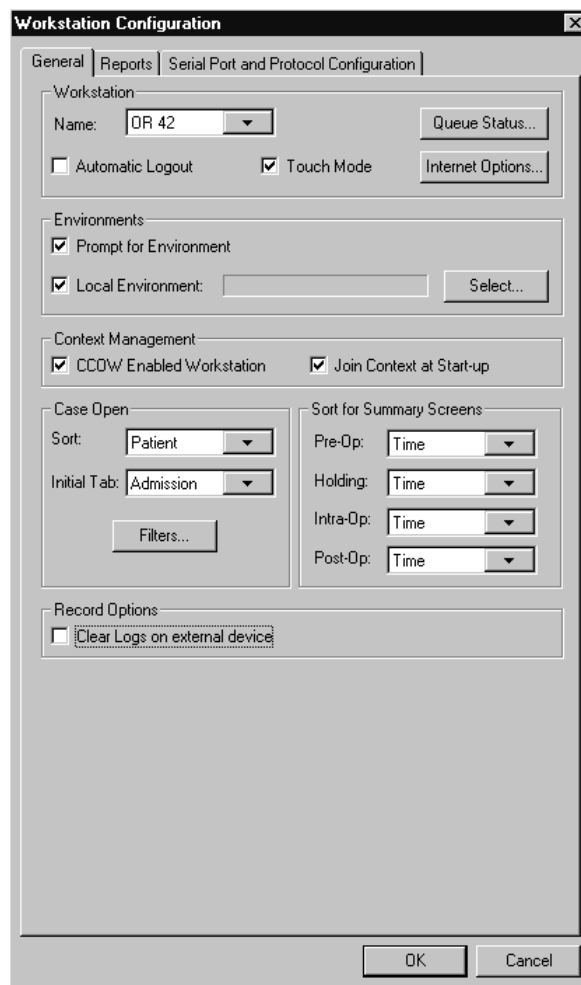
Figure 18-1. Workstation Configuration Dialog Box, General Page

4. Press the OK button to save your changes. Or, press Cancel to start over.

If you selected CCOW Enabled and then pressed OK, this message appears (Figure 18-2).
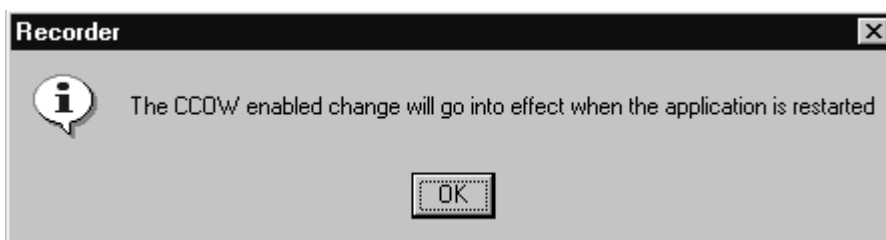
Figure 18-2. CCOW Restart Message

Click the OK button. If you selected Join Context At Start-Up and pressed OK, this message also appears (Figure 18-3):
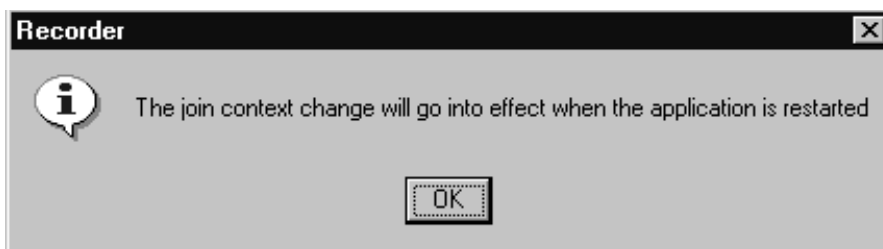
Figure 18-3. CCOW Join Message

5. Log off and exit from the Saturn Recorder program (refer to "Logging Off from Recorder" on page 21-2 and "Exiting from Recorder" on page 21-2) to restart the workstation. Now proceed to "Joining a Patient Clinical Context" on page 18-5.

Note: The Clinical Context options on the Utilities menu are not available until you restart the workstation.

CCOW Patient Context Manager | **18**

Joining a Patient Clinical Context

If you chose Join Context at Start-up in the Workstation Configuration dialog box, your workstation will join the patient clinical context each time it is started up. If that option was not selected, you can still join the patient clinical context by following the steps below.

Prerequisite

The CCOW Enabled Workstation option must be selected using the Workstation Configuration option on the Utilities menu. If you need to select this option, refer to "Configuring CCOW" on page 18-3 and then follow the steps below.

Procedure

Follow these steps to create a patient clinical context.

1. If you have just selected the CCOW Enabled Workstation option or the Join Context at Set-up option in the Workstation Configuration, restart the computer if you have not already done so.

   Note: On a nonclinical workstation, select the Saturn Recorder application from the desktop.

2. After you log on, the Recorder Main window appears (Figure 18-4).

Figure 18-4. Recorder Main Window

18 | CCOW Patient Context Manager

One or more of the following icons appear in the status bar of the Recorder Main window:

Clinical Link Off   The CCOW feature is available at this workstation, but a link to the Patient Context Manager is not yet established.

Clinical Link Changing   The CCOW feature is either in the process of connecting to the Patient Context Manager, or disconnecting from the Patient Context Manager. The Clinical Link Changing icon may appear in the status bar while the application is changing context (i.e., engaging or disengaging). The Clinical Link Off or On icon appears as soon as connection or disconnection is complete.

Clinical Link On   The CCOW feature has enabled a link to the Patient Context Manager. The patient's records can be opened and viewed, or changed simultaneously in multiple programs.

Note: The programs accessible to users in the patient context environment have been configured by your system administrator. User functionality in these programs (i.e., viewing records, copying data, changing record data, etc.) is also determined by your system administrator.

3. From the Utilities menu, select Clinical Context and then select Rejoin Clinical Link (Figure 18-5). Refer to Table 18-1 on page 18-8 for a complete list of options.
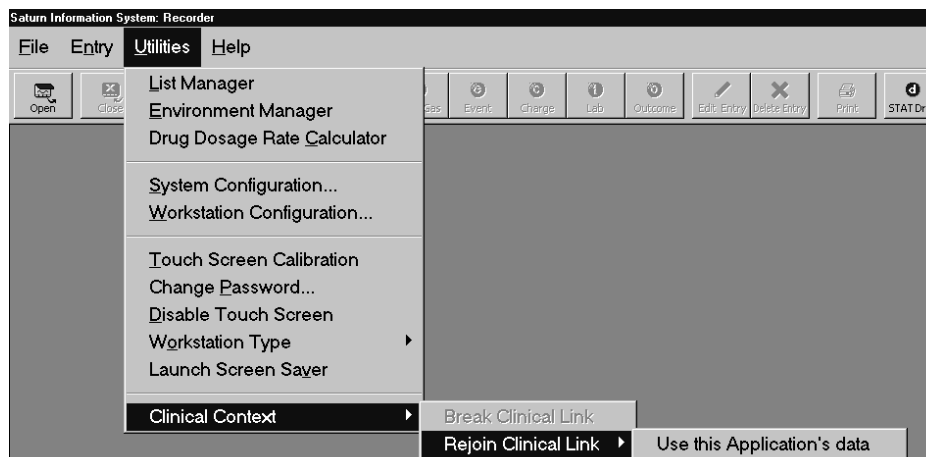

Figure 18-5. Clinical Context Options on the Utilities Menu

4. From the Recorder Main window, open a patient's case. Refer to "Opening an Existing Case" on page 4-8, or "Creating a New Case" on page 4-4.

   Note: `No Patient Available` appears in the status bar until a patient's case is opened (provided the patient has a medical record number). If the case was opened at another workstation first, you can view the case, but you cannot edit it.

5. When a change in the Patient Context Manager is requested (i.e., Rejoin Clinical Link or Break Clinical Link), a message can appear if any of the other programs are too busy to change to the patient requested from the Recorder program (Figure 18-6).
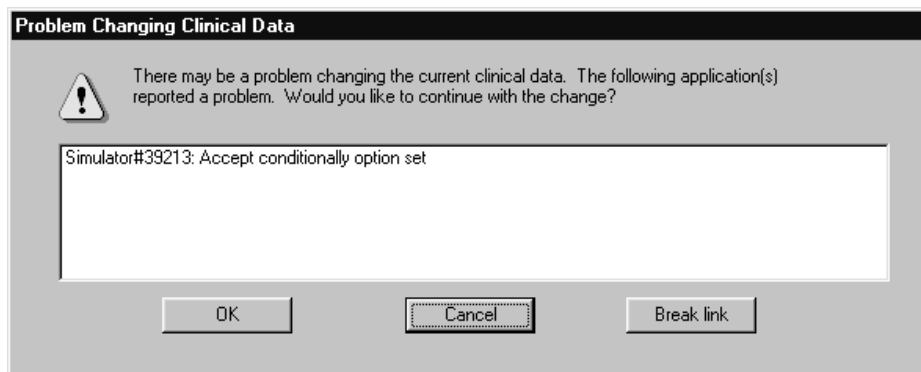

Figure 18-6. Problem Changing Clinical Data Dialog Box (Example Message)

For any message, select any of the following options:

- Select the OK button to continue with the context change. (If other applications are busy and not responding, the OK button is disabled.)

- Select the Cancel button to discontinue with the context change. If other applications do not respond to the Cancel command, you must select the Break link button.

- Select the Break link button to discontinue with the context change. The patient selected in Recorder remains displayed, but the other programs do not switch to the selected patient.

Retrieving the Last Patient in a Clinical Context

On a Saturn nonclinical workstation, you can retrieve the last patient case in a clinical context when you log off then log on, as long as the CCOW Patient Context Manager is linked to other CCOW-enabled programs and a patient context exists.

Table 18-1 provides a list of CCOW options and their meanings.

18 CCOW Patient Context Manager

Table 18-1. Clinical Context Options on the Utilities Menu

CCOW Clinical Context Option	Meaning
Break Clinical Link	Disengages from the Patient Context Manager without disabling the CCOW feature at the workstation. To connect again, select Rejoin Clinical Link.
Rejoin Clinical Link: Use this Application's Data Use Global Data	Rejoins or connects the workstation to the Patient Context Manager: • Selecting Use this Application's Data rejoins the user to the patient record selected in the Saturn Recorder program. • Selecting Use Global Data rejoins the user to the patient record selected in a program other than Recorder.
Patient	On a clinical and nonclinical workstation, displays the current patient name if the clinical link is on. *Note:* This option appears dimmed (empty) if no cases have been opened since CCOW was enabled.

Disabling CCOW

Breaking a link from the Patient Context Manager is done using the Clinical Context option on the Utilities menu.

Prerequisite

The Clinical Link On icon must be displayed in the status bar.

Procedure

From the Utilities menu, select Clinical Context, then select Break Clinical Link.

The Clinical Link Changing icon may appear in the status bar while the application is disconnecting from the Patient Context Manager.

The Clinical Link Off icon appears as soon as disconnection is complete.

19

Closing a Case

This section explains how to stop recording a case when you are finished collecting automatically recorded data, and how to end a case when you are finished working with it.

19 | Closing a Case

Stopping Case Recording

When you want to finish recording automatically collected data (i.e., data selected in the Automatic Data Settings dialog box from the Case View Settings option on the View menu), you must stop the record function.

Prerequisite   A case must be recording.

Procedure   Follow these steps to stop recording automatically collected data for a case.

1. On the toolbar, press the Record button.

   –Or–
   On the File menu, choose Record.

   –Or–
   On the keyboard, press ALT, F, R or CTRL+R.

   A confirmation message appears:

Figure 19-1. Stop Recording Dialog Box

2. Press the Yes button to stop recording.

   The following occurs:

   • Recording stops.

   • The **RECORDING** message is removed from the status bar.

   • An End of Printed Record event is placed on the Summary page.

   • An End of Printed Event marker is placed on the Event bar on the Chart page (Holding, Intra-Op and Post-Op sections).

   • If an End of Printed Event or event marker already exists from a previous stopping of anesthesia, then the original anesthesia stop time will change to the new anesthesia stop time.

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Changing the Stop Record Time

You can change the stop record time to a later time in the event you stopped recording too soon (i.e., before the patient was disconnected from the monitors) and you need to include the data collected in the buffer after you stopped recording. Refer to "Editing Event Entries" on page 10-13 to change the stop record time to a later time, and then follow the procedure below to transfer the data from the buffer into Recorder.

Note: You can also change the stop record time to an earlier time (if you continued to record after the patient was disconnected from the monitors) so that you can exclude data that does not belong in the case. You may notice data on the Chart that does not belong in the case. Refer to "Editing Event Entries" on page 10-13 to change the stop record time to an earlier time. Any buffer data that follows the new time you enter will be excluded from the case.

Prerequisite

The case must be recording (press the Record button). Be sure to transfer data before you stop recording or end the case, otherwise the data in the buffer will be lost.

Procedure

Follow these steps to load buffer data into Recorder:

1. On the Edit menu, choose Rollback. (If no data exists, Rollback is dimmed on the Edit menu.) If data exists in the buffer, a screen resembling Figure 19-2 appears:
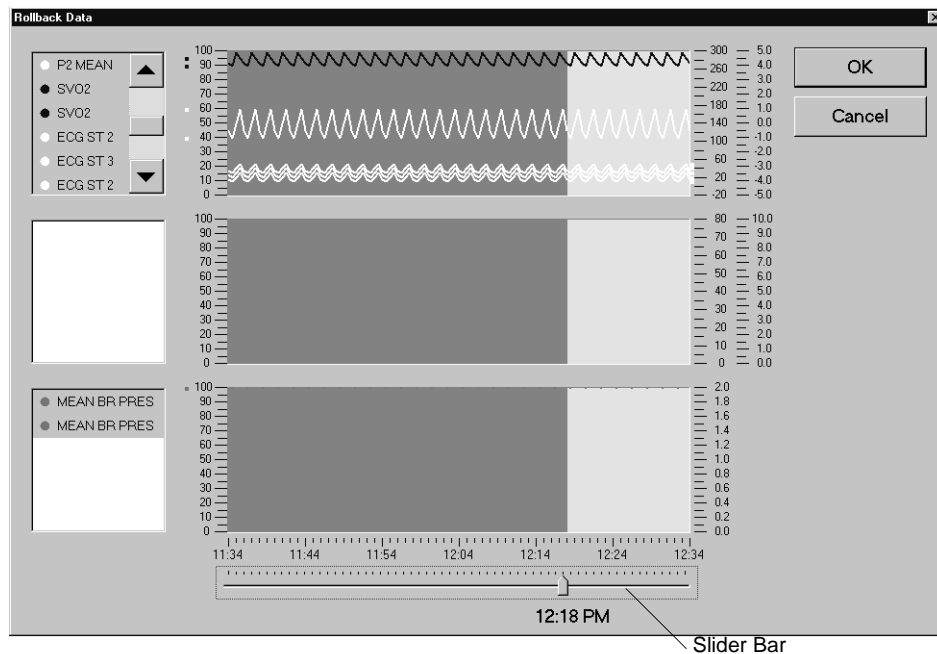

Figure 19-2. Rollback Data Screen

The slider bar shows a time range beginning with the time the case stopped recording, and ending with the last data recorded (up to one hour).

2. Select and drag the arrow on the slider bar to select the data you want added to the case. The data in the range that you select is highlighted. Data on the graphs outside the area you highlight will not transfer to Recorder.

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3. Press the OK button. The data you selected is loaded into the Recorder application, and the stop record event time is changed to the rollback stop time.

Note: Repeat steps 2 and 3 if you missed any data you still want to add to the case.

Closing a Case

When you are finished working with a case, you should close it. Closing a case prevents others from entering information into the case record.

Closing a case does not mean that you cannot re-enter it and record data to the case later. However, check with your system administrator to determine the amount of time after a case is closed that it can be edited.

Note: Items without entries are deleted when a case is closed. For example, if you select a drug, but you do not enter a dose in the Add Drug Entry dialog box, the drug is removed when you close the case. However, unfinished STAT entries remain in the case.

Prerequisite   It is recommended that the Last name box or the Medical Record box in the Patient area of the Demographics page of the Admission section be completed.

Procedure   Follow this procedure to close a case:

1. On the toolbar, press the Close button.

   –Or–
   On the File menu, select Close.

   –Or–
   On the keyboard, type ALT, F, C.

   If either of the patient name or medical record number is incomplete when you try to close the case, you are prompted to enter a name or number (Figure 19-3).
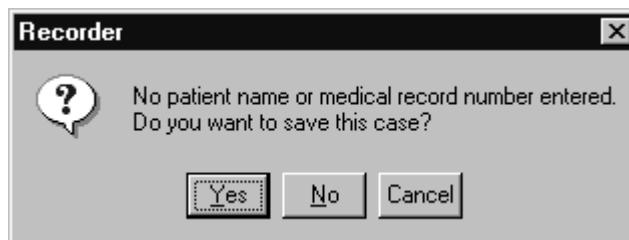

Figure 19-3. Close Case Dialog Box

2. Select one of the following options from the Close Case dialog box:

   • Yes - Pressing the Yes button saves and closes the case without the patient name or medical number.
   • No - Pressing the No button does not save the case and it does not appear in the Open Case window if it was a new case.

- Cancel - Pressing the Cancel button leaves the case open for you to continue entering and recording data.

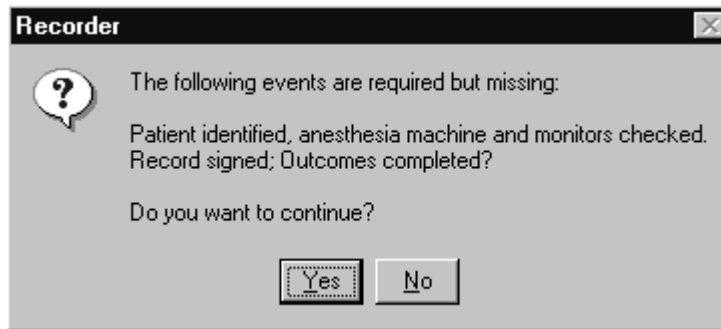Recorder also prompts if required events are missing (Figure 19-4 on page 19-5).

Figure 19-4. Events Missing Dialog Box

3. Select one of the following options from the Close Case dialog box:

- Yes - Pressing the Yes button closes the case without including the required missing events.
- No - Pressing the No button does not close the case. You can go back and fill in the missing data before you close the case.

Note: If you press the Yes button, a message will appear when the case is reopened that describes the missing required boxes. See "System Configuration Required Fields Page" on page 3-8 for more information.

When the case is closed, the Main window appears.

Refer to Table 19-1 if messages appear while closing a case.

Table 19-1. Possible Case Closing Messages

Message	What To Do
The following events are required but missing: ... Do you want to continue? Yes or No	This message appears for missing events that have been configured as "required." • If you select Yes, the case closes. • If you select No, the case remains open.
The End of Anesthesia Care event is missing. Do you want to continue? Yes or No	This message appears if a Start of Anesthesia Care was entered, but no End of Anesthesia Care was entered. You must manually enter the missing event. Refer to "Adding Event Entries" on page 10-4 for details. • If you select Yes, the case closes. • If you select No, the case remains open.

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Table 19-1. Possible Case Closing Messages (continued)

Message	What To Do
The Start of Anesthesia Care and End of Anesthesia Care events are out of sequence. Do you want to continue? Yes or No	This message appears if a Start of Anesthesia Care and an End of Anesthesia Care event are out of sequence, or the Start of Anesthesia Care event is missing. Refer to "Editing Event Entries" on page 10-13 to revise these event times. • If you select Yes, the case closes. • If you select No, the case remains open.
Stop recording data for the case? Yes No	This message appears if the case is recording when you try to close a case. • Select Yes to stop case recording. • Select No to continue recording data in the case. The case remains open.
Either the network or server is down. Do you want to continue? Yes or No	This message appears if the server or network is unavailable when closing a case. • If you select Yes to close the case, you will not be able to reopen it until the server or network is restored. • If you select No, the case remains open. • In either case, no data will be lost.
Stop recording data for the case? Yes or No	This message appears if automatic data is being recorded for the case. • If you select Yes, automatic data recording is stopped. • If you select No, recording continues.
No patient name or medical record number entered. Do you want to save this case? Yes, No, or Cancel	This message appears if no name or medical record number is entered for the case. • If you select Yes, the case is closed and saved. • If you select No, the case is closed and not saved. • If you select Cancel, the case remains open.
Cannot close case until all event times are before the End of Printed Anesthesia Record event time.	This message appears if the Prohibit case close when all events are not on record is selected in the System Configuration, and one or more events is past the End of Printed Anesthesia Record event time. Select OK to return to the case.

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Table 19-1. Possible Case Closing Messages (continued)

Message	What To Do
Saturn has detected an abnormality with communications to the server. Please contact your Saturn Support Administrator or Draeger Saturn Support for assistance.	This message appears if the size of the queue — which is used to send data to the server — is larger than normal. Select OK to close the case, and contact your system administrator.
Saturn has detected a server communications error. Case data may be locked and inaccessible in the future. Please contact your Saturn Support Administrator or Draeger Saturn Support for assistance.	This message appears if the previous message was ignored and the problem was not fixed. The queue has gotten larger and may begin to cause problems. Select OK to close the case, and contact your system administrator.

19 Closing a Case

Recorder User's Guide

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Printing

This section describes how to print reports in the Recorder program. Numerous reports can be printed that contain information in the Pre-Op, Holding, Intra-Op and Post-Op sections, as well as patient demographic information. The reports that any user can print from a workstation are determined on the Reports page of the Workstation Configuration option on the Utilities menu.

20 | Printing

About Printing Reports

Recorder lets you print several reports from anywhere in the program. The reports you can print at any one time are limited to the data recorded in a single section of the patient's case (i.e., Pre-Op, Holding, Intra-Op and Post-Op). Depending on the security rights configured by the system administrator, you may be able to print reports in any of the sections mentioned above.

To get a report that contains *all* entries for a case, you must run a summary report in the Case Manager program. Refer to Case Manager in the "Saturn Administrator's Guide" for details.

All reports include:

- A page number in the form of "Page 1 of 3"
- The software version number in the Draeger Medical, Inc. copyright string at the bottom of the page
- The facility document number in the configured corner (if the print function is configured as such)
- Patient demographic and admission data, including name, age, date of birth (DOB), sex, weight, height, admission number, medical record number, diagnosis with codes, procedures with codes, ASA number, date, time and location. Demographic and admission data is printed at the top of every report. Data that is unique to some reports is listed in the sections that follow.

The reports can be printed during or after a case. If a case is recording, only that case can be printed from the workstation. Data recording continues without change while printing is active. If a case is not recording, any case can be retrieved from the database and printed.

The following pages describe the report printing capabilities in the Pre-Op, Holding, Intra-Op and Post-Op sections of a patient's record. Each section's reports are described in Tables 19-1 through 19-4.

Default Reports

Whenever you select the Print option on the File menu and press the Reports button in the Select Reports dialog box, you may see reports already selected on the various pages of the dialog box. These were configured in the Workstation Configuration screen of the Utilities menu as "default" reports by the system administrator. For example, if you select the Print button on the toolbar, or select Print and then OK from the File menu (without pressing the Reports button), these reports will print automatically.

However, you may print *any* report in the Select Reports dialog box by selecting the check box next to a report. (You may also deselect default reports you don't want to print by clearing the check boxes.) After you print your selections, the configured "default" reports will replace the report(s) you just selected in the Reports dialog box.

Refer to Section 3 for more information about configuring default reports.

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Viewing Record Reports

Record reports can be generated in the Holding, Intra-Op and Post-Op pages of the Select Reports dialog box. Record reports are divided into three areas. Each has a grid, graph and events section (see Figure 20-1 on page 20-14). These areas are described below.

Grid Section

The grid section contains a minimum of 35 lines (rows) of automatically collected and manually entered data, such as drugs, vitals, labs, etc. The data is arranged in the same order as the grid section in the display. The default time scale for printing data configured for 30-second intervals is 5 minutes unless you have administrative rights, which enables you to print the 30-second data. Otherwise, the data is printed using the time scale selected in the Case View Settings option on the View menu.

Graph Section

The graph section is printed in the bottom half of the Record report. It contains certain data that is automatically collected by the Recorder program. A grid line just above the graph area indicates any events recorded so far in the case, with the number of the event displayed in the time column according to the event entry time.

The legend to the right of the graph area lists some of the automatically collected data (selected in the Case View Settings dialog box) and the symbols that represent that data on the graph (including start and end of surgery and required signatures). The first two columns to the left of the graph area show the Sp02 and Temperature data ranges; the third column displays a date range for all other data.

Events Section

The Events in a case are printed in two columns at the bottom of a Record report. The list includes the name and time of the event, the event number that corresponds to the number displayed above the graph, as well as any comments that were recorded. If more room is required to print all events occurring in the time frame for the current page, the events are wrapped to the next page.

20 | Printing

Pre-Op Reports

You can run the following Pre-Op reports. Pre-Op reports are described in Table 20-1 on page 20-4.

- History report
- Systems report
- Exam & Plan report
- HPI (History of Present Illness) report
- Summary report

In addition, a Pre-Op Summary report can include any of the following:

- Drugs
- Vitals
- Systems
- Events
- Charges
- Fluids
- Outcomes
- Labs
- History

The demographic and admission data included on all Pre-Op reports includes the following:

- Anesthetist(s), Anesthesiologist(s), Surgeon(s), ASA #, Date, Location, Time Printed, Discussed Anesthesia Plan, Admission Type, Insurance, Patient Name, Age, D.O.B. (date of birth), Sex, Weight, Height, Admission #, Medical Record #, Diagnosis with Code(s), and Procedures with Code(s).

Table 20-1. Pre-Op Reports

Option	Description
History Report	This report is titled "Pre-Op History Report" and consists of all items entered on the History page, including the patient's history of medications, allergies, family history, surgical history, anesthesia history, and medical history. Comments are also included. • The None check box is checked if None is selected for a history group.
Systems Report	This report is titled "Pre-Op Patient Systems Report" and consists of conditions and comments entered on the Systems page, including the patient's respiratory, hepato/gastrointestinal, cardiovascular, neuro/musculoskeletal, renal/endocrine, and other systems. • The WNL (Within Normal Limits) check box is checked if WNL is selected for a system. • The N/A (Not Applicable) check box is checked if N/A is selected for a system.

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Table 20-1. Pre-Op Reports (continued)

Option	Description
Exam & Plan Report	This report is titled "Pre-Op Exam & Plan Report" and consists of items entered and selected on the Exam and Plan pages, including lab tests and values, vital names and values, special information (hearing and visual impairment, etc.), airway and other information (autodonated blood, etc.), habits (alcohol use, etc.), anesthetic plan, and staff involved in the case.
HPI (History of Present Illness) Report	This report is titled "HPI Report" and contains up to 4,000 characters of text describing the history of the patient's present illness entered for the case. Up to 99 copies of this report can be printed.
Summary Report	This report is titled "Pre-Op Summary" and contains the following: • A chronological summary of data from the time of the first entry of the case to the time of the "Start of the Printed Holding Record," or "Start of the Printed Anesthesia Record" event, or the current time if not found. • The following items can appear in this report and are described below: drugs, manual vitals, systems, events, charges, fluids, outcomes, labs, and history.
Drugs	A chronological list of drugs entered in the case that includes date, time, drug name, charge code, quantity given, unit, route, quantity/kg, total, total units, and comment.
Vitals	A chronological list of manual vitals entered in the case that includes a description, time, value, and comment.
Systems	A list of systems data that includes a description, time, and comment.
Events	A chronological list of events entered in the case that includes a description, time, electronic signature and time of signature, and comment.
Charges	A chronological list of charges entered in the case that includes a description, time, comment, and charge code.
Fluids	A chronological list of fluids entered in the case that includes date, time, fluid/gas name, charge code, quantity, unit, route, total, total units, and comment.
Outcomes	A chronological list of outcomes entered in the case that includes a description, time, location, severity, explanation, and resolution.
Labs	A chronological list of labs entered in the case that includes a description, time, result, comment, and charge code.
History	A list of patient historical data that includes a description, time, and comment.

20 | Printing

Holding Reports

You can run the following reports in the Holding section. Holding reports are described in Table 20-2.

- Record report
- Summary report

In addition, a Summary Report can include one or several of the following:

- Drugs
- Vitals
- Events
- Charges
- Fluids
- Outcomes
- Labs
- Status

The demographic and admission data included on all Holding reports includes the following:

Anesthetist(s), Anesthesiologist(s), Surgeon(s), ASA #, Date, Location, Time Printed, Discussed Anesthesia Plan, Admission Type, Insurance, Patient Name, Age, D.O.B. (date of birth), Sex, Weight, Height, Admission #, Medical Record #, Diagnosis with Code(s), and Procedures with Code(s).

Table 20-2. Holding Reports

Option	Description
Record Report	The Record report is titled "Holding Record" and contains the following: • The numeric grid and the graph under the numeric grid with display data from the time of the "Start of the Printed Holding Record" event to the time of the "End of the Printed Holding Record" event, or the current time if not found. • Events under the graph are events from the time of the "Start of the Printed Holding Record" event to the time of the "End of the Printed Holding Record" event, or the current time if not found.
Summary Report	This report is titled "Holding Summary" and contains the following: • A chronological summary of data from the time of the "Start of the Printed Holding Record" event to the time of the "End of the Printed Holding Record" event, or the current time if not found. • The following items can appear in this report and are described below: drugs, manual vitals, events, charges, fluids, outcomes, labs, and status.
Drugs	A chronological list of drugs entered in the case that includes date, time, drug name, charge code, quantity given, unit,, route, quantity/kg, total, total units, and comment.

Table 20-2. Holding Reports (continued)

Option	Description
Vitals	A chronological list of manual vitals entered in the case that includes a description, time, value, and comment.
Events	A chronological list of events entered in the case that includes a description, time, electronic signature and time of signature, and comment.
Charges	A chronological list of charges entered in the case that includes a description, time, comment, and charge code.
Fluids	A chronological list of fluids entered in the case that includes date, time, fluid/gas name, charge code, quantity, unit, route, total, total units, and comment.
Outcomes	A chronological list of outcomes entered in the case that includes a description, time, location, severity, explanation, and resolution.
Labs	A chronological list of labs entered in the case that includes a description, time, result, comment, and charge code.
Status	A chronological list of pre-procedure conditions in the case that includes a description, time, and comment.

20 | Printing

Intra-Op Reports

You can run the following reports in the Intra-Op section. Intra-Op reports are described in Table 20-3.

- Record report
- Summary report

Note: Selecting the Print All option in the Select Reports dialog box prints all records showing data at 30-second intervals. However, you must have administrator privileges to select this option. Even if the Time Scale in the Case View Settings dialog box (selected from the View menu) is set to 30 seconds, the report will show data at 5-minute intervals unless the Print All option is selected.

In addition, a Summary Report can include one or several of the following:

- Drugs
- Vitals
- Events
- Charges
- Fluids
- Outcomes
- Labs

The demographic and admission data included on all Intra-Op reports includes the following:

Anesthetist(s), Anesthesiologist(s), Surgeon(s), ASA #, Surgery Date, Location, Time Printed, Anesthesia Type, Anesthesia Care and Surgery Start and Stop Times with Totals[1], Patient Name, Age, D.O.B. (date of birth), Sex, Weight, Height, Admission #, Medical Record #, Diagnosis with Code(s), and Procedures with Code(s).

Table 20-3. Intra-Op Reports

Option	Description
Record Report	The Record report is titled "Anesthesia Record" and contains the following: • The numeric grid and the graph under the numeric grid with display data from the time of the "Start of the Printed Anesthesia Record" event to the time of the "End of the Printed Anesthesia Record" event, or the current time if not found. • Events under the graph display events from the time of the "Start of the Printed Anesthesia Record" event to the time of the "End of the Printed Anesthesia Record" event, or the current time if not found.

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1. The report header displays the times of the first "Start of Anesthesia Care" event and the last "End of Anesthesia Care" event if more than one of these types of events has been entered in the case. In addition, the sum of these event intervals (i.e., total time) are displayed in the report header.

Table 20-3. Intra-Op Reports (continued)

Option	Description
Summary Report	This report is titled "Intra-Op Summary" and contains the following: • A chronological summary of data from the time of the "Start of the Printed Anesthesia Record" event to the time of the "End of the Printed Anesthesia Record" event, or the current time if not found. • The following items can appear in this report and are described below: drugs, manual vitals, events, charges, fluids, outcomes, and labs.
Drugs	A chronological list of drugs entered in the case that includes date, time, drug name, charge code, quantity given, unit, route, quantity/kg, total, total units, and comment.
Vitals	A chronological list of manual vitals entered in the case that includes a description, time, value, and comment.
Events	A chronological list of events entered in the case that includes a description, time, electronic signature and time of signature, and comment.
Charges	A chronological list of charges entered in the case that includes a description, time, comment, and charge code.
Fluids	A chronological list of fluids entered in the case that includes date, time, fluid/gas name, charge code, quantity, unit, route, total, total units, and comment.
Outcomes	A chronological list of outcomes entered in the case that includes a description, time, location, severity, explanation, and resolution.
Labs	A chronological list of labs entered in the case that includes a description, time, result, comment, and charge code.

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**Post-Op
Reports**

You can run the following reports in the Post-Op section. Post-Op reports are described in Table 20-4 on page 20-11.

- Record report
- Systems report
- Score report
- Assessment report
- Checks report
- Discharge report
- Summary report

In addition, a Summary Report can include any of the following:

- Drugs
- Vitals
- Systems
- Acknowledgements
- Events
- Charges
- Checks
- Fluids
- Outcomes
- Discharges
- Assessments
- Labs
- Score

The demographic and admission data included on all Post-Op reports includes the following:

- Post-Op Nurse(s), Discharged by Order of, Transported By, Received By, ASA #, Surgery Date, Location, Time Printed, Anesthesia Type, Start and Stop of Printed Post-Op Record times[1] and Surgery Start and Stop Times with Totals, Patient Name, Age, D.O.B. (date of birth), Sex, Weight, Height, Admission #, Medical Record #, Diagnosis with Code(s), and Procedures with Code(s)

Table 20-4. Post-Op Reports

Option	Description
Record Report	The Chart report is titled "Post-Op Record" and contains the following: • The numeric grid and the graph under the numeric grid with display data from the time of the "Start of the Printed Post-Op Record" event to the time of the "End of the Printed Post-Op Record" event, or the current time if not found. • Events under the graph display events from the time of the "Start of the Printed Post-Op Record" event to the time of the "End of the Printed Post-Op Record" event, or the current time if not found.
Systems Report	This report is titled "Post-Op Patient Systems Report" and consists of conditions and comments entered on the Systems page, including the patient's respiratory, hepato/gastrointestinal, cardiovascular, neuro/musculoskeletal, renal/endocrine, and other systems. • The WNL (Within Normal Limits) check box is checked if WNL is selected for a system. • The N/A (Not Applicable) check box is checked if N/A is selected for a system.
Score Report	This report is titled "Post-Op Score Report" and displays the following: • All of the active score parameters and values selected on the Score page from the time of the "Start of the Printed Post-Op Record" event to the time of the "End of the Printed Post-Op Record"event, or the current time if not found. • The score legend under the numeric grid displays the scores and the associated status of each.

---

1. The report header displays the time entered for the Start of Printed Post-Op Record event for the start time, and the time entered for the End of Printed Post-Op Record event for the stop time. The End of Record time, minus the Start of Record time, is displayed for the total.

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Table 20-4. Post-Op Reports (continued)

Option	Description
Assessment Report	This report is titled "Post-Op Assessment Report" and displays the following: • All of the assessment parameters selected on the Assess page from the time of the "Start of Printed Post-Op Record" event in chronological order, including the status, time and comment for each one.
Check Report	This report is titled "Post-Op Checks Report and displays the following: • All of the active check parameters and values selected on the Checks page from the time of the "Start of the Printed Post-Op Record" event to the time of the "End of the Printed Post-Op Record" event, or the current time if not found.
Discharge Report	This report is titled "Post-Op Discharge" and displays the following: • A chronological list of items, times and comments entered on the Discharge page (Evaluation of Plan of Care, Instruct Family/Patient In, and Transfer Summary). • A list of staff members who discharged, transported and received the patient, and electronic signatures if applicable.
Summary Report	This report is titled "Post-Op Summary Report" and displays the following: • A chronological summary of data from the time of the "Start of the Printed Post-Op Record" event to the time of the "End of the Printed Post-Op Record" event, or the current time if not found. • The following items can appear in this report and are described below: drugs, manual vitals, systems, acknowledgements, events, charges, checks, fluids, outcomes, discharges, assessments, labs, and scores.
Drugs	A chronological list of drugs entered in the case that includes date, time, drug name, charge code, quantity given, unit, route, quantity/kg, total, total units, and comment for each one.
Vitals	A chronological list of manual vitals entered in the case that includes a description, time, value, and comment for each one.
Systems	A list of patient systems entered on the Systems page that includes a description, time, and comment for each one.
Acknowl-edgements	A list of Admission Acknowledgements entered on the Post-Op Chart that includes a description, time and comment for each.
Events	A chronological list of events entered in the case that includes a description, time, electronic signature and time of signature, and comment.

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Table 20-4. Post-Op Reports (continued)

Option	Description
Charges	A chronological list of charges entered in the case that includes a description, time, and comment for each one.
Checks	A list of the check parameters and values selected on the Checks page that includes date, time, parameter name, status, and comment for each one.
Fluids	A chronological list of fluids entered in the case that includes date, time, fluid/gas name, charge code, quantity, unit, route, total, total units, and comment for each one.
Outcomes	A chronological list of outcomes entered in the case that includes a description, time, location, severity, explanation, and resolution for each one.
Discharge	A list of items selected on the Discharge page that includes a description, time and comment for each one.
Assess-ments	A list of the assessment parameters selected on the Assess page in chronological order, including the status, time and comment for each one.
Labs	A chronological list of labs entered in the case that includes a description, time, result, comment, and charge code for each one.
Score	A chronological list of score parameters selected on the Score page that includes date, time, parameter name, score, status, and comment for each one.

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Figure 20-1. Print Preview of an Anesthesia Record (Intra-Op)

Figure 20-2. Print Preview of a Summary Report (Post-Op)

> ***Note:*** All Summary Reports have been modified to show the electronic signature and time of signature for events.

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Using the Print Option

You can select, deselect, preview, and print one or more reports from the Print dialog box. You can also select a different number of copies than the number configured.

Note: Refer to Table 20-5 on page 20-20 if messages appear while attempting to select, preview or print a report.

Prerequisite

The case for which you want to select, preview and print reports must be open.

Procedure

1. To access the Print dialog box, follow the procedure for the input device you are using:

   Touch Screen   Tap the File menu and then tap Print.

   Mouse   Click the File menu and then click Print.

   Keyboard   Type ALT, F, P (or CTRL+P) to select Print from the File menu.

   The Print dialog box appears (Figure 20-3).

Figure 20-3. Print Dialog Box

2. To preview a report before you print it, press the Print Preview button and refer to step 2 in "Using the Print Preview Option" on page 20-18. Or, continue to the next step.

3. Do one of the following:

   • To print the default reports (i.e., the reports configured in the Workstation Configuration option on the Utilities menu), press the OK button. The reports are printed. Or,

   • To select reports other than those configured, or to select a different number of copies than is configured, press the Reports button. The Select Reports dialog box appears (Figure 20-4 on page 17). Complete the remaining steps.
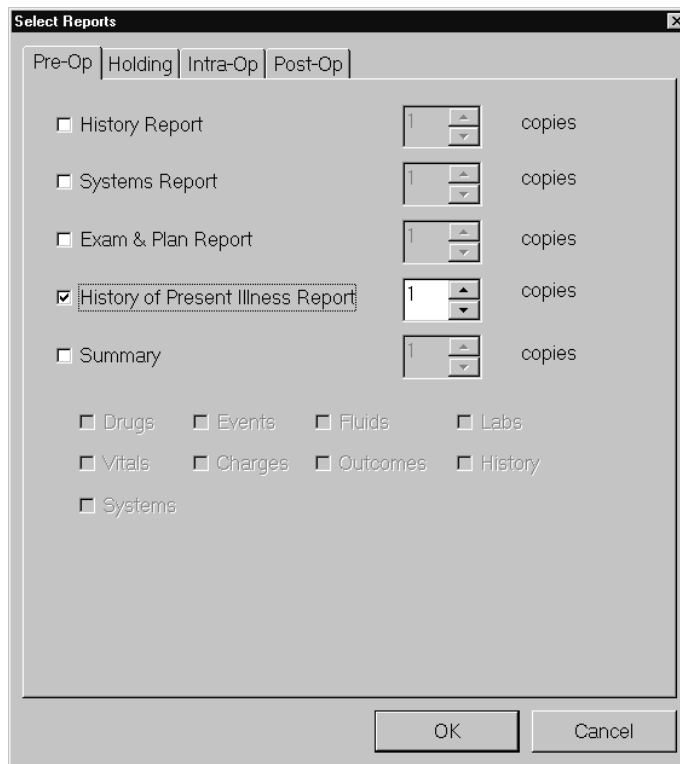
Figure 20-4. Select Reports Dialog Box (Pre-Op tab shown)

4. Select a section tab (Pre-Op, Holding, Intra-Op or Post-Op) at the top of the dialog box. A list of reports for that section appears.

5. Select the reports you want to print by clicking the check box next to a report. If you select a Summary report, also select the data you want included on that printed report (i.e., Drugs, Vitals, etc.).

    Note: When you select the Print All option on the Intra-Op tab of the Select Reports dialog box, Saturn prints all records showing data at 30-second intervals. However, you must have administrator privileges to select this option. Even if the Time Scale in the Case View Settings dialog box (selected from the View menu) is set to 30 seconds, the report will show data at 5-minute intervals unless the Print All option is selected.

6. Select the number of copies you want to print for each report by clicking the arrows in the copies box. Or, type the correct number in the copies box.

7. Press OK to save the report selections, or press Cancel to return to the Print dialog box without saving the selections.

    Note: The following message appears (Figure 20-5 on page 20-18) if less than 1 copy or more than 99 copies have been selected. You will not be able to preview or print the report until you select a valid number. Press OK, and then repeat the last two steps.

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Figure 20-5. Printing Error Message

8. Press OK in the Print dialog box to print the reports (and the number of copies) you just selected.

Using the Print Preview Option

Use the following procedure to preview and print configured reports only. If you print using this option, all configured reports will be printed.

Note: Refer to Table 20-5 on page 20-20 if messages appear while attempting to preview or print a report.

Prerequisite

The case for which you want to preview or print reports must be open.

Procedure

Follow this procedure to preview a report and then print it.

1. To preview a report, follow the procedure for the input device you are using:

Touch Screen	Tap the File menu and then tap Print Preview.
Mouse	Click the File menu and then click Print Preview.
Keyboard	Type ALT, F, V to select Print Preview from the File menu.

The first report configured for your workstation appears on the screen (see Figure 20-1 on page 20-14 and Figure 20-2 on page 20-15).

2. Press one or more of the following buttons at the top of the screen (Figure 20-1):

   • Press the Print button to print the report(s). All reports configured for your workstation will be printed.

   • Press the Next Page button to view the next page of the report. (This button is disabled if there are no more pages.)

   • Press the Prev Page button to view the previous page of the report. (This button is disabled if there are no previous pages.)

   • Press the Two Page button to display two pages of the report side-by-side on the screen. (If the report is comprised of two pages, the button now changes to One Page.)

   • Press the Zoom In button up to two times to enlarge the view of the report. (This button is disabled after pressing it two times.)

   • Press the Zoom Out button up to two times to shrink the view of the report. (This button is disabled after pressing it two times.)

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- Press the Close button to escape the Print Preview screen without print-ing the report.

Using the Print Button or the Keyboard

Use the Print button on the Recorder toolbar — or use the keyboard — if you want to print all configured reports without previewing them or changing the number of copies.

Note: Refer to Table 20-5 on page 20-20 if messages appear while attempting to print a report.

Prerequisite

The case for which you want to print reports must be open.

Procedure

To print all reports configured for this workstation, follow the procedure for the input device you are using:

Touch Screen	Tap the Print button on the Recorder toolbar.
Mouse	Click the Print button on the Recorder toolbar.
Keyboard	Type ALT, F P or CTRL+P. Then press the ENTER key when the Print dialog box appears.

All the reports are printed.

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Refer to Table 20-5 if messages appear while attempting to print a case report.

Table 20-5. Possible Print Messages

Message	What To Do
The following events are required but missing: Do you want to continue? Yes No	This message appears for missing events that have been configured as "required." • If you select Yes, the report is printed. • If you select No, the report is not printed.
The 'End of Anesthesia Care' event is missing. Do you want to continue? Yes No	This message appears if a Start of Anesthesia Care was entered, but no End of Anesthesia Care was entered. You must manually enter the missing event. • If you select Yes, the report is printed. • If you select No, the report is not printed.
The 'Start of Anesthesia Care' and 'End of Anesthesia Care' events are out of sequence. Do you want to continue? Yes No	This message appears if a Start of Anesthesia Care and an End of Anesthesia Care event are out of sequence, or the Start of Anesthesia Care event is missing. Refer to "Editing Event Entries" on page 10-13 to revise these event times. • If you select Yes, the report is printed. • If you select No, the report is not printed.
Either the network or server is down. Do you want to continue? Yes No Could not start print job.	This message appears if the server or network is unavailable when printing a report. • If you select Yes to print the report, the second message appears. You must print to a local printer until the server or network is restored. • If you select No, the print command is cancelled. In either case, no data will be lost.
Stop recording data for the case? Yes No	This message appears if the case is recording when a Print job is requested. • Select Yes to stop case recording. • Select No to continue recording data in the case.

21

Exiting Recorder

This section explains how to log off and exit from the Recorder application.

21 | Exiting Recorder

Logging Off from Recorder

When you are finished using Recorder, you should log off. Logging off prevents others from entering information under your user ID.

Prerequisites   All cases must be closed.

Procedure   Follow these steps to log off from Recorder.

On the toolbar, press the Logout button.

–Or–
On the File menu, choose Logout.

–Or–
On the keyboard, type ALT, F, L.

If a case is open, you are prompted to close the case before logging off. If you do not close the case before logging off, it will remain on the screen and will be opened automatically to the next person who logs on. Other messages may also appear.

After you respond to all messages, Recorder logs off and displays the Recorder Logon dialog box so that the next user can log on.

Exiting from Recorder

If you are at a nonclinical workstation, you can use the Exit function to simultaneously log off from Recorder and return to Windows NT.

If you are at a clinical workstation, you cannot close or exit from the Recorder program, but you can restart the workstation.

Prerequisite   All cases must be closed. See "Closing a Case" on page 19-4 for more information.

Procedure   Perform the following procedure to exit from Recorder (nonclinical workstations only), or to restart the workstation (clinical workstations).

Do one of the following:

• At a *nonclinical* workstation, select Exit from the File menu. Recorder logs off the application and returns you to Windows NT.

   Note: If a case is open, you are prompted to close the case before logging off. Other messages may also appear, which you must respond to before you are logged off.

• At a *clinical* workstation, select Exit from the File menu. The Exit dialog box appears (Figure 21-1 on page 21-3).

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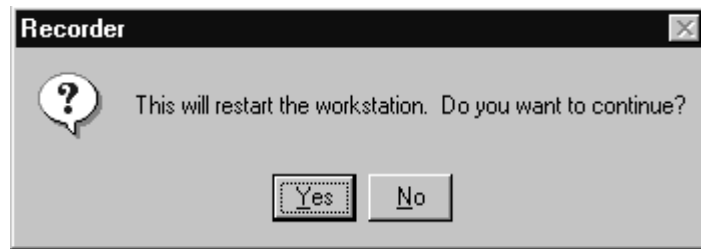
Figure 21-1. Exit Dialog Box (Clinical Workstation)

Select Yes to restart the workstation. Recorder closes all applications that are running and restarts the workstation after you are prompted.

Select No to keep the Recorder application open.

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22

Specifications

This section contains equipment specifications for Saturn Clinical workstations.

Note: **The Saturn Clinical Workstation is in compliance with the standards of Safety Requirements for Medical Electrical Systems, IEC 601-1-1.**

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Workstation Processor Unit

Note: The Saturn Clinical Workstation Processor with Monitor is certified to be in compliance with the requirements of the Standard for Information Technology Equipment, Including Electrical Business equipment CSA C22.2 No. 950, UL-1950, and IEC 950.

General

Dimensions (Width x Height x Depth) . . . . 14.25 x 13.25 x 6 inches

Weight . . . . 19 lbs

Standard Configuration (minimum). . . . . 1.2 gigabytes

Processor . . . Intel Pentium 166MHz or 233MHz or AMD K6-2 400 MHz[1]

Monitor Dimensions (Height x Length x Thickness). . . . 13 x 15 x 2 inches

Monitor Weight . . . . 13 lbs

Electrical

Equipment Class . . . . .Class 1

Input Voltage . . . . 100 - 120 VAC/200 - 240 VAC, 50/60Hz

Input Current . . . . 5.0/3.0 amps

Leakage Current . . . . $\leq$ 700 uA

Ground Impedance . . . . $\leq$ 0.10 Ohm (60 Hz source)

Note: The Saturn Clinical Workstation is preset to 115 volts, which is the output of the isolation transformer. This configuration does not require another voltage setting.

Model POC 153

The following specifications apply to the Advantech Model POC 153 only.

General

Dimensions (Width x Height x Depth) . . . . 16.3 x 13.34 x 4.52 inches

Weight . . . . 14.4 lbs

Standard Configuration (minimum). . . . . 20 gigabytes

Processor . . . . Intel Pentium III 850 MHz

Electrical

Equipment Class . . . . .Class 1

Input Voltage . . . . 100 - 250 VAC, 50/60Hz

Input Current . . . . 3.0 amps

Leakage Current . . . . Per UL 2601-1

Ground Impedance . . . . $\leq$ 0.10 Ohm (60 Hz source)

---

1. Nonclinical workstations require at least a 400-MHz processor.

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Environmental

Operating	Temperature. . . . . .10 - 40° C
	Relative Humidity . . . . .10 - 90% noncondensing
Storage	Temperature. . . . . 0 - 60° C
	Relative Humidity . . . . .10 - 90% noncondensing

Isolated Power Supply

Note: The Saturn Clinical Workstation Isolated Power Supply complies with the following Medical Electrical Equipment, Part 1: General Requirements for Safety standards: IEC 601-1, UL 2601-1, and CAN/CSA C22.2 No. 601.1-M90.

General Dimensions (Height x Width x Depth) and Weight . . . . .varies

Electrical Equipment Class . . . . . Class 1, Type B per IEC 601, continuous operation

Ingress of Liquids . . . . ordinary equipment

Input Voltage . . . . .100/120/220/240 VAC, 50/60 Hz

Input Power (maximum) . . . . 800 VA

Output Voltage. . . . . 120 VAC 50/60 Hz, 5A

Output Power (minimum) . . . . 480 VA/280 W

Chassis Leakage Current . . . . $\leq$ 70 microamps

Ground Impedance . . . . $\leq$ 0.10 Ohm (60 Hz source)

Battery Backup . . . . . . $\geq$ 3 minutes when powering a 480VA reactive load

Environmental

Operating	Temperature. . . . . .10 - 40° C
	Relative Humidity . . . . .15 - 70% noncondensing
Storage	Temperature. . . . . .0 - 45° C
	Relative Humidity . . . . .10 - 90% noncondensing

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Touch Screen Maintenance

This section contains guidelines for cleaning the touch screen and includes a list of chemicals that generally do not damage the screen if splashed and promptly removed.

Screen Maintenance

Clean the touch screen with household glass cleaner and paper towels.

Note: Always dampen the towel and then clean the touch screen.

Chemical Resistance

The touch area of the screen is resistant to the following chemicals when exposed for a period of one hour at a temperature of 70° F (21° C):

- Acetone
- Common foods and beverages
- Isopropyl alcohol
- Methyl ethyl ketone
- Turpentine
- Ammonia-based glass cleaners
- Hexane
- Methylene chloride
- Mineral spirits

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A

Appendix A: Getting Started

This section provides abbreviated instructions for getting you started in the Saturn Recorder application. It is recommended that you refer to the individual sections for complete instructions and the index for further information regarding the contents of this section.

A   Appendix A: Getting Started

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Appendix A: Getting Started | **A**

Starting Recorder

At nonclinical workstations, you manually start Recorder by selecting it from the desktop, just as you would with any other Windows application.

Note: At clinical workstations, Recorder starts automatically when you turn on the computer.

Procedure To manually start Recorder from a nonclinical workstation, follow the procedure for the input device you are using:

Touch Screen or Mouse	Double-tap or double-click the Recorder icon on the Windows NT desktop.
Keyboard	With the ARROW keys, select the Recorder icon on the Windows NT desktop, and then press the ENTER key.

–Or–
From the Start button, select Programs, then Saturn, then Recorder. |

The Logon dialog box appears (Figure 1).
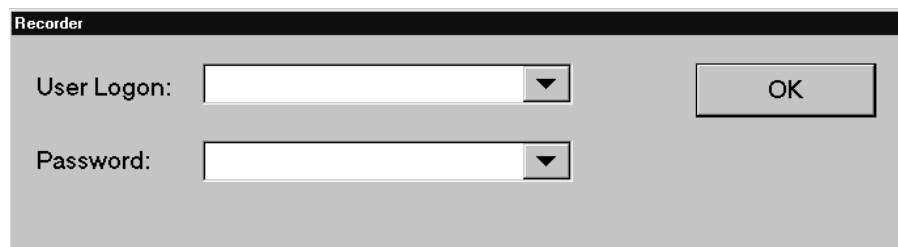
Figure 1. Logon Dialog Box

Logging On to Recorder

Before you can use Recorder, you must log on. The logon process ensures that only authorized users can access the application. The user ID and password are both case sensitive, so make sure you know which letters are uppercase and which are lowercase.

Note: Only one user can be logged on to a workstation. The File menu and the toolbar provide a Logout option that you must use before another user can log on to the workstation.

Prerequisites The Recorder program must have been started, and the Logon dialog box must be on the screen (Figure 2). If you are at a nonclinical workstation, see "Starting Recorder" on page A-3. If you are at a clinical workstation, Recorder is started automatically when you turn on the computer.

Procedure Follow these steps to log on to Recorder.

1. In the User Logon box (Figure 2), select your user ID from the list, or type it on the keyboard. Make sure to type all letters in the correct case.

2. Do one of the following:

   - In the Password box, type the password on the keyboard. Make sure to type all letters in the correct case.

   - A numeric keypad may be displayed when you press the arrow in the Password box (Figure 2). You can click or press the numeric password on the keypad and then press ENTER. Click or press C to clear any numbers if you need to start over.

   For security purposes, asterisks are displayed instead of the password as you type.
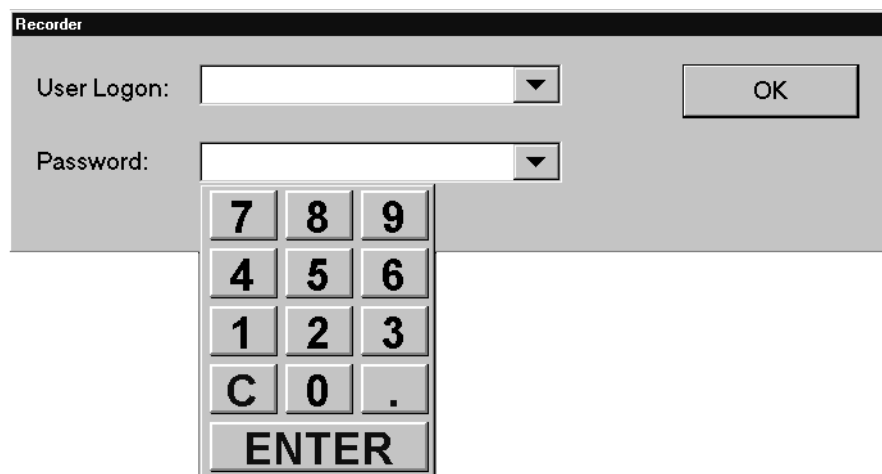
Figure 2. Logon Dialog Box with Keypad

3. Press the OK button. The Main window appears (Figure 3 on page A-5). You are logged on to Recorder.

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Main Window

When Recorder is running, its Main window is displayed. If a case is open, it will be contained inside of the Main window. However, if no cases are open, the Main window will be empty, as shown in Figure 3.

Figure 3. Main Window, No Cases Open

A | Appendix A: Getting Started

Selecting a Workstation Type

Depending on the Saturn components purchased by your health care organization, you can change a workstation type (i.e., Pre-Op, Holding, Intra-Op, and Post-Op) from the Utilities menu. Changing the workstation type allows you to view, change, delete, or add data in the various sections of Recorder, depending on the security rights assigned to you.

Note: The workstation *configuration* is not affected when you change the workstation type.

Prerequisites
- You must be a valid Saturn user with a password.
- All cases must be closed.

Procedure
Follow these steps to change a workstation from one type to another.

1. At the Recorder Main window (Figure 3 on page A-5), select Workstation Type from the Utilities menu. The workstation type options appear (Figure 4):
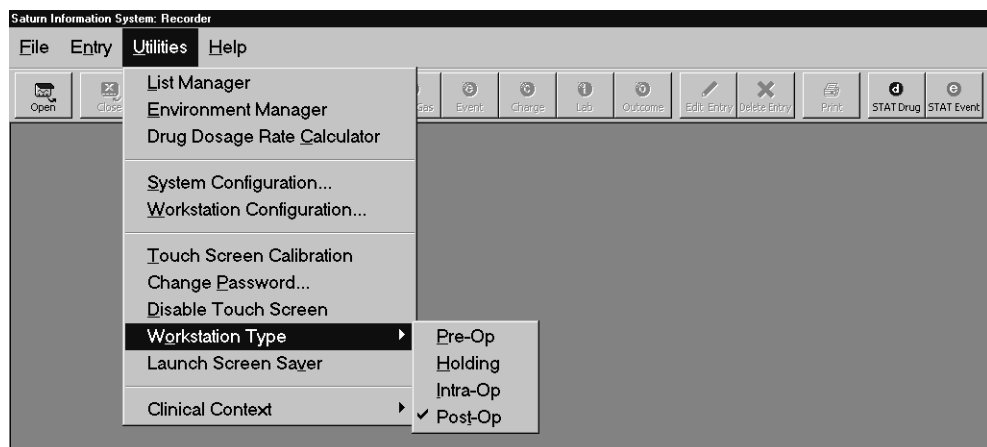
Figure 4. Workstation Type Option on the Utilities Menu

2. Select one of the following:

Pre-Op	Allows you to view, add or change preoperative data.
Holding	Allows you to view, add or change holding data.
Intra-Op	Allows you to view, add or change OR data.
Post-Op	Allows you to view, add or change postoperative data.

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A message similar to Figure 5 appears:
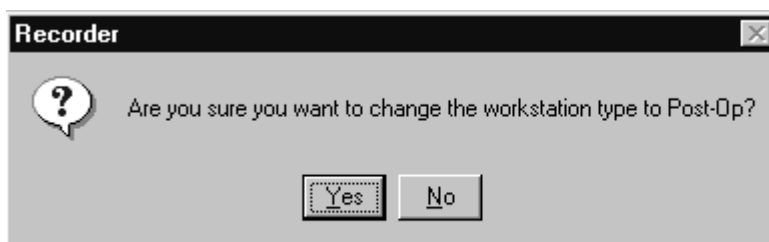
Figure 5. Example Workstation Type Message

3. Select one of the following:

- If you select Yes, the workstation changes to the type you selected.
- If you select No, the workstation type is not changed.

4. Repeat step 1 to verify that the workstation type you chose now has a check mark next to it in the Workstation Type list.

Depending on your security rights, you now will be able to view, change or add manually or automatically collected data in the corresponding section of Recorder.

A | Appendix A: Getting Started

Calibrating the Touch Screen

The Utilities menu lets you configure your workstation's touch screen.

Procedure   Follow this procedure to calibrate the touch screen.

Note: The OK, Cancel, and Apply buttons exist on every page of the Elo Touchscreen Properties dialog box (Figure 6).

- The OK button saves any changes that you make to the touch screen configuration.

- The Cancel button exits you from the Elo Touchscreen Properties dialog box without saving any changes that you made.

- The Apply button applies changes that you made in the Elo Touchscreen Properties dialog box. However, these changes are only saved if you press the OK button.

1. From the Utilities menu, choose Touch Screen Calibration.

   The Elo Touchscreen Properties dialog box appears with the General page displayed (Figure 6).
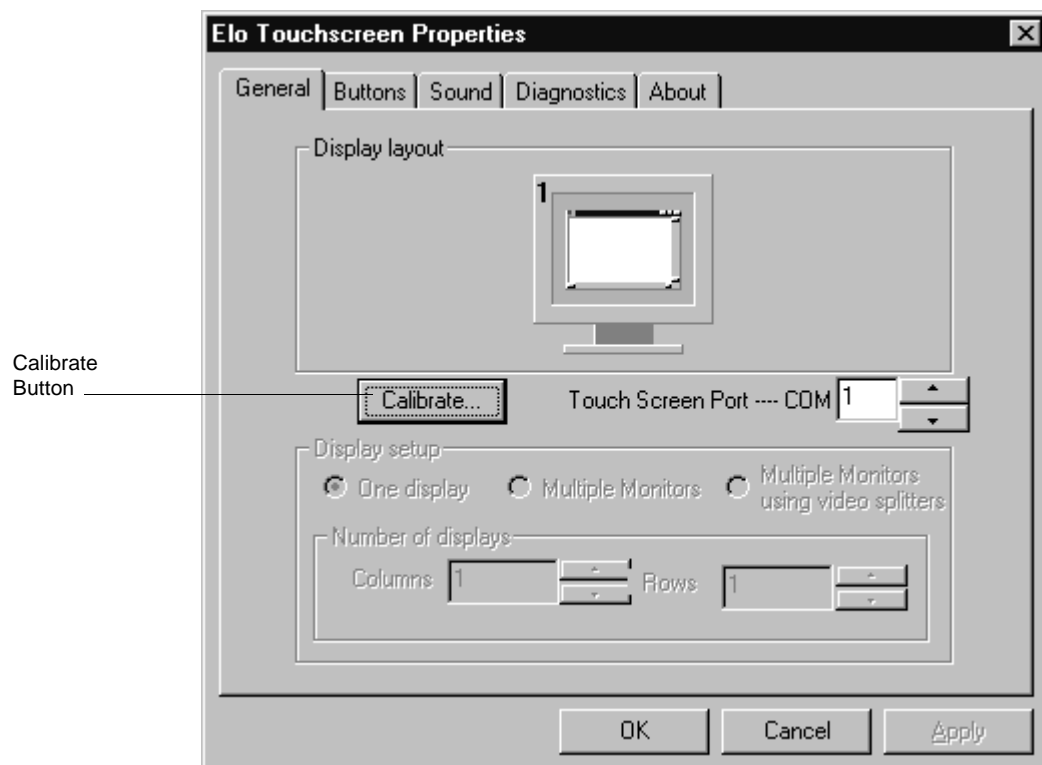
Figure 6. Elo Touch Screen Dialog Box, General Page

2. Press the Calibrate... button (Figure 6) to display the Calibration screen (Figure 7).

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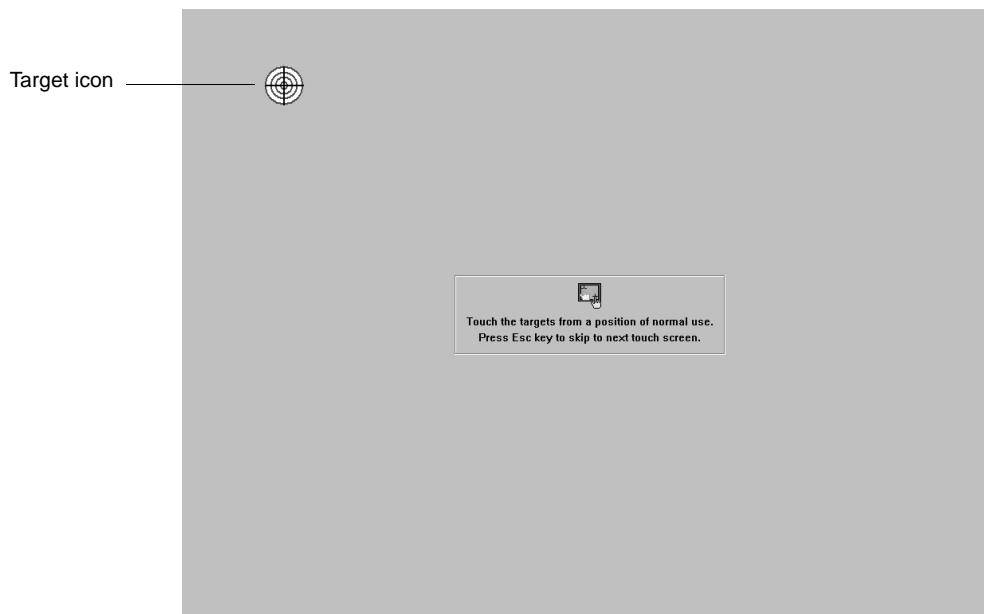
Figure 7. Calibration Screen

3. Touch the target icons (Figure 7) using your finger or pointer device until the Check Calibration dialog box appears (Figure 8).
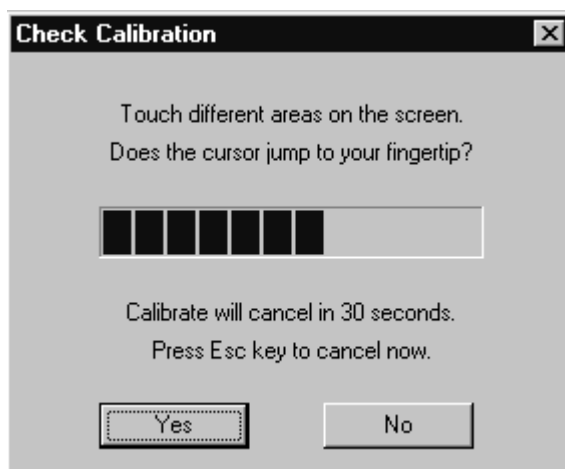
Figure 8. Check Calibration Dialog Box

4. Touch the screen several times to ensure the cursor/pointer appears on the screen after you have touched it. In about 30 seconds, the General page of the Elo Touchscreen Properties dialog box reappears. Press OK.

   Important: If the calibration software is interrupted and it appears as if the system is locked (i.e., the touch commands are not functioning when you touch them), you may have miscalibrated. The software will time-out and the previous settings will take effect. Press the ESC key, then go back to step 1 and try again.

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About Loading Environments

Environments are created by your system administrator using the Environment Manager program. The first time you open or try to create a case, you may be required to "load an environment."

An environment is a set of characteristics that your health care organization has chosen to be used in a specific health care setting. For example, an environment named "Cardiac" might consist of particular drugs, fluids, labs, charges and events that would be specific to the preoperative, holding, OR and postoperative phases of heart surgery. Another environment might exist for procedures related only to obstetrics and gynecology, and so on.

Refer to "Creating a New Case" on page 4-4 for selecting an environment.

Creating a New Case

Under normal circumstances, you must create a new case before you can enter or record "automatic" data for the case. However, in an emergency you can begin recording information immediately and then go back and enter the rest of the case data later. See "Emergency Situations" on page A-15 for details.

The first screen that appears when you log on to recorder depends on the Initial Tab setting in the Workstation Configuration sheet. For example, if the workstation is configured as a Holding workstation, then the Holding Chart or Holding Summary page most likely appears when you create a new case.

Prerequisites
- You must be authorized to create a new case.
- At clinical workstations, all cases must be closed before you can create a new one.

Note: At nonclinical workstations, 10 cases can be open at a time.

Procedure Follow these steps to create a new case.

1. On the toolbar, press the Open button. When the Open Case dialog box appears, press the New Case button.

   –Or–
   On the File menu, choose New Case.

   –Or–
   On the keyboard, press CTRL+N.

   If you have a problem: If the Open toolbar button or New Case dialog box button is disabled, you may not be authorized to create or open a case, or you may be at a clinical workstation where another case is already open.

2. Do one of the following:

   - If a blank page for your workstation type appears (i.e., Admission, Pre-Op, etc.), go to the next section.
   - If the Select Environment dialog box appears, select an environment in the Environment Name column and press OK. Or press Cancel for no environment to be loaded.

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Changing General Display Parameters

You can change certain elements of a Chart for the current case by modifying the *case settings*. Case settings are saved with the patient case. When you open the case, it uses the last settings entered.

Note: This section applies to the Charts in the Holding, Intra-Op and Post-Op sections.

Prerequisite   The case for which you want to change settings must be open.

Procedure   Follow these steps to change display parameters for the current case.

1. From the View menu, choose Case View Settings. The Case View Settings dialog box appears (Figure 9).
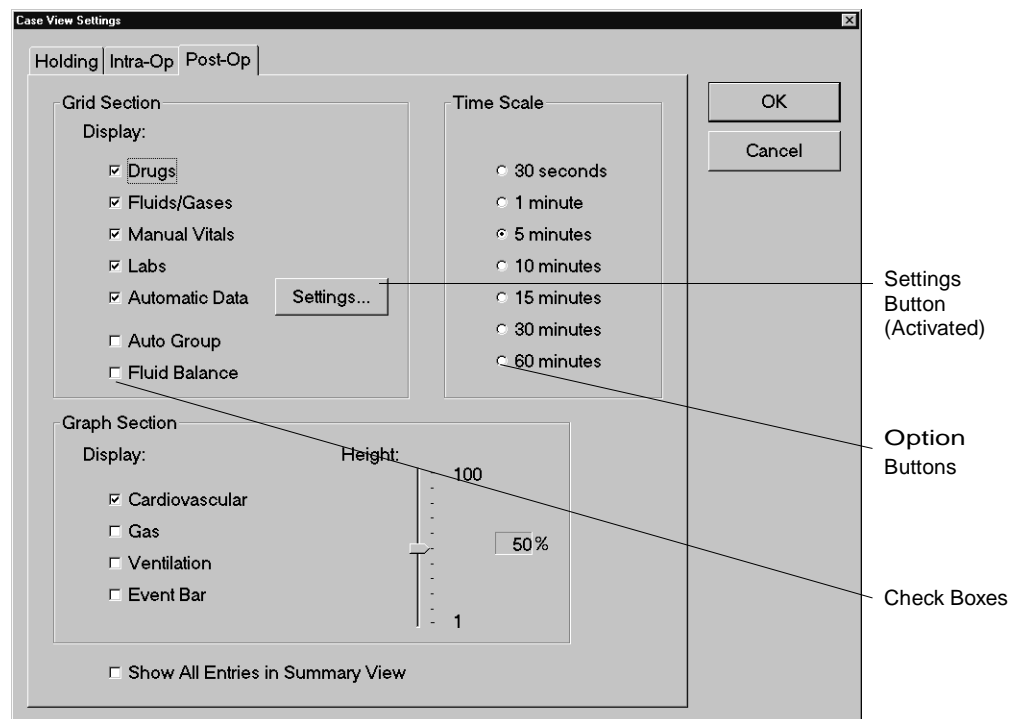
Figure 9. Case View Settings Dialog Box

2. Click the Holding, Intra-Op or Post-Op tab, depending on your workstation type. Change the Case View settings by selecting or clearing check boxes and option buttons. For more information about each setting, see Table 8-6 on page 8-12.

    Note: Go to "Automatic Data" on page A-12 if you selected the Automatic Data check box.

3. Press OK if you are done making selections.

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Automatic Data

If you select Automatic Data in the Grid Section of the Case View Settings dialog box, the Settings button is activated (Figure 9). Using this button, you can select the automatic data that you want to appear on the Chart of a Holding, Intra-Op or Post-Op workstation.

1. Press the Settings button. The Settings dialog box appears (Figure 10).
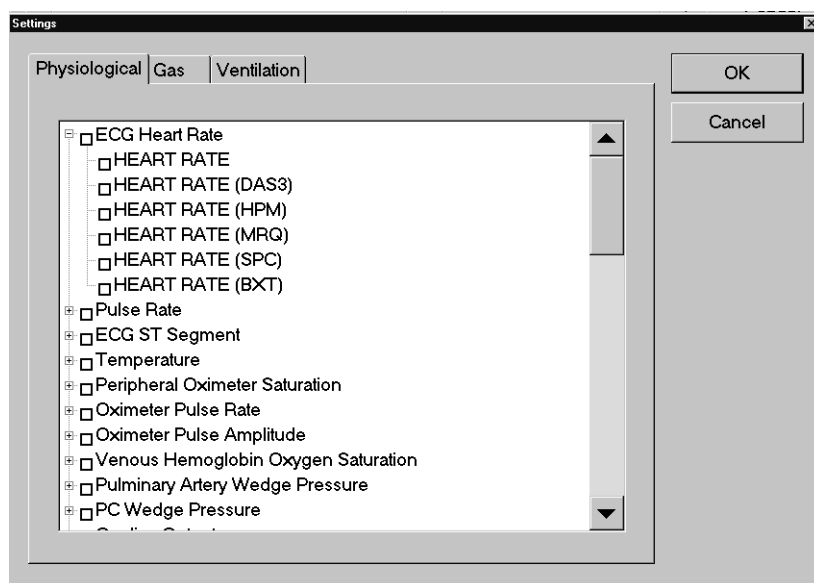
Figure 10. Automatic Data Settings Dialog Box

2. Select the check boxes for the data you want displayed in the Grid Section of a Chart.

   Note: Select the plus (+) sign to view a sublist for each category. If you check a box with a plus (+) sign, its entire sublist is selected automatically. To deselect an item so that it is not displayed in the grid, select or click the check box to clear it. Repeat this step for each tab (i.e., Physiological, Gas, and Ventilation).

3. Press the OK button to save your changes.

Before You Begin Recording

If your workstation loads an environment, the data (automatic data, time scales, fluid balance, event bar, etc.) that will appear in the grid and graph areas of a Chart (Holding, Intra-Op and Post-Op) has been selected already.

However, if no environment is loaded, or no data has been preconfigured to appear in the grid and graph sections of a Chart, you should configure it for each case by selecting the Case View Settings option on the View menu. Refer to "Changing General Display Parameters" on page A-11 for more information.

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Recording a Case

In order to record data collected automatically for a case in the holding area, the operating room or the postoperative location, you must press the Record button.

Prerequisites
- You must have created or opened a case before you begin recording.
- You must be a Holding, Intra-Op or Post-Op workstation type (see "Selecting a Workstation Type" on page A-6).

Note: If you cannot open the case you want to record, you may not be authorized to do so, or the case may already be open at another workstation.

Procedure
Follow this procedure to start (and stop) recording automatically collected data for a case.

1. On the toolbar, press the Record button. (The first time it is pressed, this button starts recording. The second time it is pressed, this button stops recording.)

   –Or–
   On the File menu, choose Record.

   –Or–
   On the keyboard, press ALT, F, R.

   The following occurs:

   - The case begins Recording.
   - A **RECORDING** message appears on the status bar at the bottom of the window.
   - A check mark appears next to the Record option on the File menu.
   - A *Start of Printed (Holding, Anesthesia or Post-Op) Record* event is placed on the Summary page, depending on the Workstation Type selected on the Utilities menu.

2. To stop recording data for the case, press the Record button.

   –Or–
   On the File menu, choose Record.

   –Or–
   On the keyboard, press ALT, F, R. A message appears. Select Yes to stop recording.

   The following occurs:

   - The case stops recording.
   - The **RECORDING** message disappears from the status bar at the bottom of the window.
   - The check mark is removed next to the Record option on the File menu.
   - An "End of (Holding, Anesthesia, or Post-Op) Record" event is placed on the Summary page, depending on the Workstation Type selected on the Utilities menu.

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Changing the Start Record Time

In the event you forgot to press the Record button as soon as the patient was connected to the monitors, Recorder lets you "roll back" the start record time up to one hour to include the automatic data held in the buffer that belongs in the case.

Note: You can also change the start record time to a later time in the event you pressed the Record button too soon (i.e., before the patient was connected to the monitors). You may notice data on the Chart that does not belong in the case. Refer to "Editing Event Entries" on page 10-13 to change the start record time to a later time. Any data that precedes the new time you enter will be excluded from the case.

Prerequisite

The case must be recording. Be sure to roll back data before you stop recording or end the case, otherwise the data in the buffer will be lost.

Procedure

Follow these steps to load buffer data into Recorder:

1. On the Edit menu, choose Rollback. (If no data exists, this message appears: "There is no data in the rollback buffer.") If data exists in the buffer, a screen resembling the one in Figure 11 appears:
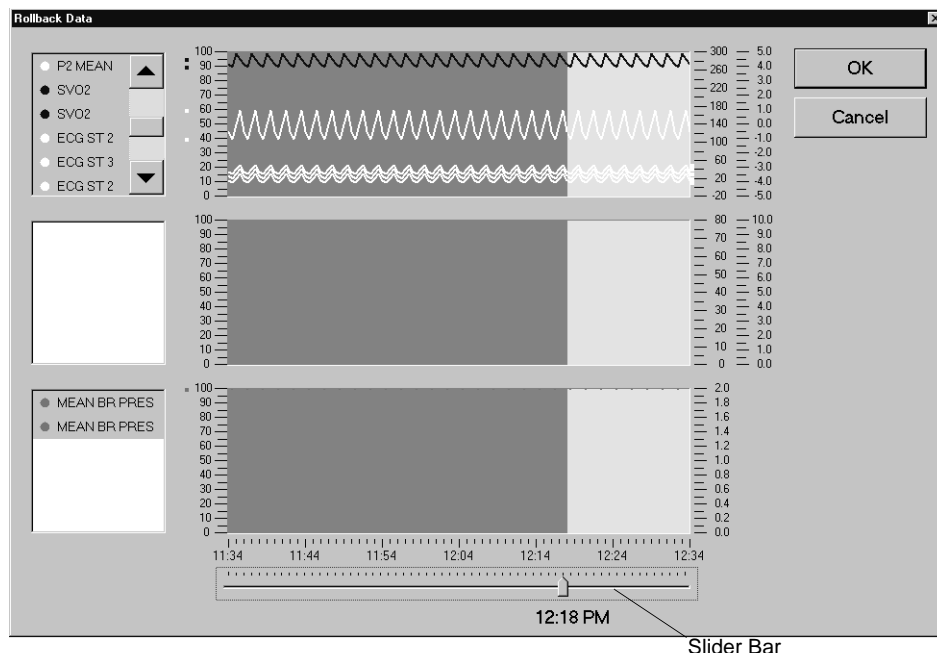
Figure 11. Rollback Data Screen (Example Only)

The slider bar shows a time range, beginning with the time the case was opened (up to one hour earlier) and ending with the last data recorded.

2. Select and drag the arrow on the slider bar to select the data you want added to the case. The data in the range that you select is highlighted. Data on the graphs outside the area you highlight will not transfer to Recorder.

3. Press the OK button. The data you selected is loaded into the Recorder application, and the start record event time is changed to the rollback start time.

Note: Repeat steps 2 and 3 if you missed any data you want added to the case.

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Emergency Situations

In an emergency situation, you can use the STAT Drug and STAT Event functions to mark the date and time a drug is administered or when an event occurs. A case does not need to be open when you add a STAT entry. The STAT entries appear in the next case that is opened, whether it is a new case or an existing case. When you have more time, you can create or open the case and update the STAT entries with more information.

Entering Data Using the STAT Buttons

There are no prerequisites. This function can be done at any time.

Procedure

Follow these steps to add a STAT entry.

1. On the toolbar, press either the STAT Drug or STAT Event button.

   –Or–
   On the Entry menu, select STAT Drug or STAT Event.

   –Or–
   On the keyboard, press F11 (for a drug) or F12 (for an event).

   Note: When you press the STAT button, the date and time are recorded as the date and time of drug administration or event occurrence.

2. For each additional drug administration or event occurrence that you want to enter quickly, press the appropriate STAT button.

3. When you have time, create or open the case and update the STAT entries. For update instructions, see "Editing Drug Entries" on page 9-11 and "Editing Event Entries" on page 10-13.

   Note: The STAT entries you make will be included in the next case opened at this workstation. Therefore, it is recommended that you open the patient's case if one already exists, or create the case by entering the patient's name or the data required to establish a new case (i.e., medical record number, etc.) as soon as possible. You can fill out the remaining entry boxes in the case later. Otherwise, you risk the chance that the STAT entries will be included in another patient's case.

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Entering Admission Data

The Admission section lets you enter data about the patient's admission and upcoming surgery. It also lets you view milestone events relating to the patient's status.

Prerequisite

The case for which you want to enter patient information must be open.

Procedure

Follow this procedure to open the Admission section.

Press the Admission tab at the bottom of the Recorder window.

–Or–
On the View menu, choose Admission.

–Or–
On the keyboard, press ALT, V, A, D.

The Demographics page of the Admission section appears (Figure 12).

Demographics Page

The Demographics page (Figure 12) allows you to enter all the necessary patient information needed for record keeping, as well as to view the patient's status of the completed or incomplete milestone events configured by your system administrator.

Figure 12. Blank Admission Section, Demographics Page

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Prerequisite The Admission section tab and the Demographics page tab must be selected.

Procedure Follow this procedure to enter admission data.

Note: If the patient is in the database, you can load the patient's demographic information into Recorder by completing steps 1 and 2.

1. Do one of the following:

   Press the Lookup button. The Select Patient dialog box (Figure 13) appears. Type the patient's last name (the letters appear in the speed search box as you type them). Names beginning with the letters you type will appear. Search the list to see if the patient is in the database. When you find the patient, go to the next step. If not, press Cancel and go to step 3.

   –Or–

   In the Last box, enter the patient's last name, then press the TAB key. If the last name is in the database, the Select Patient dialog box appears. Search the list to see if the patient is in the database. If not, press Cancel and go to step 3.

2. Select the patient from the Select Patient dialog box and press the OK button to load the patient's demographic information into the boxes and establish the case.

3. If the patient is not in the database, enter the patient's last name and press the TAB key to move to the next box and establish the case. Enter all necessary information. Refer to Table 5-1 on page 5-4 for a description of each box on the Demographics page.

Figure 13. Select Patient Dialog Box

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Surgery & Anes. Page

The Surgery & Anes. page allows you to enter the patient's diagnosis, surgical procedure, anesthesia procedure and type, DRG, staff assigned to the case, and date of surgery.

Prerequisite

The Admission section tab must be selected.

Procedure

Follow this procedure to enter surgery and anesthesia data.

1. Press the Surgery & Anes. page tab.

   –Or–
   On the View menu, choose Admission and then Surgery/Anesthesia.

   –Or–
   On the keyboard, press ALT V, A, S.

   The Surgery & Anes. page appears (Figure 14).

Figure 14. Admission Section, Surgery & Anes. Page

2. Enter surgery and anesthesia information as described in Table 5-2 on page 5-8. You can return to the Admission section as often as you wish to add new information or edit previously entered information.

Adding Items to a Case

You can add new drug, fluid/gas, event, charge, lab, or vital entries to the case while viewing the Chart. When you add a drug dose, fluid/gas dose, lab result, or vital, a new row is created on the grid. When you add an event entry, a new marker is placed on the Event bar. The addition of a new charge entry does not appear anywhere on the Chart. However, like all other added data items, the new charge becomes part of the case record and can be viewed on the Summary page.

The following procedure provides general instructions for adding a data item to the case on the Holding, Intra-Op Chart using the toolbar, the Entry Menu, and the keyboard. For more information about adding a particular type of data, consult the section of this manual that discusses that type of data:

- "Adding Drug Entries" on page 9-2,
- "Adding Event Entries" on page 10-4,
- "Adding Fluid/Gas Entries" on page 11-2,
- "Adding Outcome Entries" on page 12-2,
- "Adding Lab Entries" on page 13-2,
- "Adding Manual Vital Entries" on page 14-2, and
- "Adding Charge Entries" on page 15-2.

Procedure Follow this procedure to add data entries to the case:

1. On the toolbar, press the appropriate button:

Vital	Event	Outcome
Drug	Charge	STAT Drug
Fluid/Gas	Lab	STAT Event

   Or–
   On the Entry menu, chose one of these items:

Vitals	Events	Outcomes
Drugs	Charges	STAT Drug
Fluids/Gases	Labs	STAT Event

   –Or–
   On the keyboard, press one of the following key combinations:

To add vitals:	F4
To add drugs:	F5
To add fluids/gases:	F6
To add events:	F7
To add charges:	F8
To add lab results:	F9
To add outcomes:	F10

2. In the Add dialog box that appears, complete the information and then press the OK button.

   The data is added to the case record. If the data is a drug, manual vital, lab result, or fluid/gas, a row is added to the grid as long as it is selected in the Case View Setting dialog box. If the data is an event, a marker is also added to the Event bar.

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Entering Pre-Op Data

The Pre-Op section allows you to enter, view and change preoperative data relevant to a patient's case.

Prerequisite
- The patient's case must be open.
- Pre-Op must be selected in the Workstation Type list on the Utilities menu.

Procedure Follow this procedure to open the Pre-Op section.

Press the Pre-Op tab at the bottom of the Recorder window, then press the History page tab.

–Or–
On the View menu, choose Pre-Op, then History.

–Or–
On the keyboard, press ALT V, P, H.

The Pre-Op section opens to the History page (Figure 15). The remaining Pre-Op pages (Systems, Exam, Plan, HPI and Summary) can be accessed by selecting the page tabs on the right side of the screen.

History Page The History page allows you to enter and view the patient's history of medications, allergies, family diseases, surgeries, any anesthesia previously administered to the patient, and the patient's medical history. See Table 6-1 on page 6-6 for a description of options on the History page.
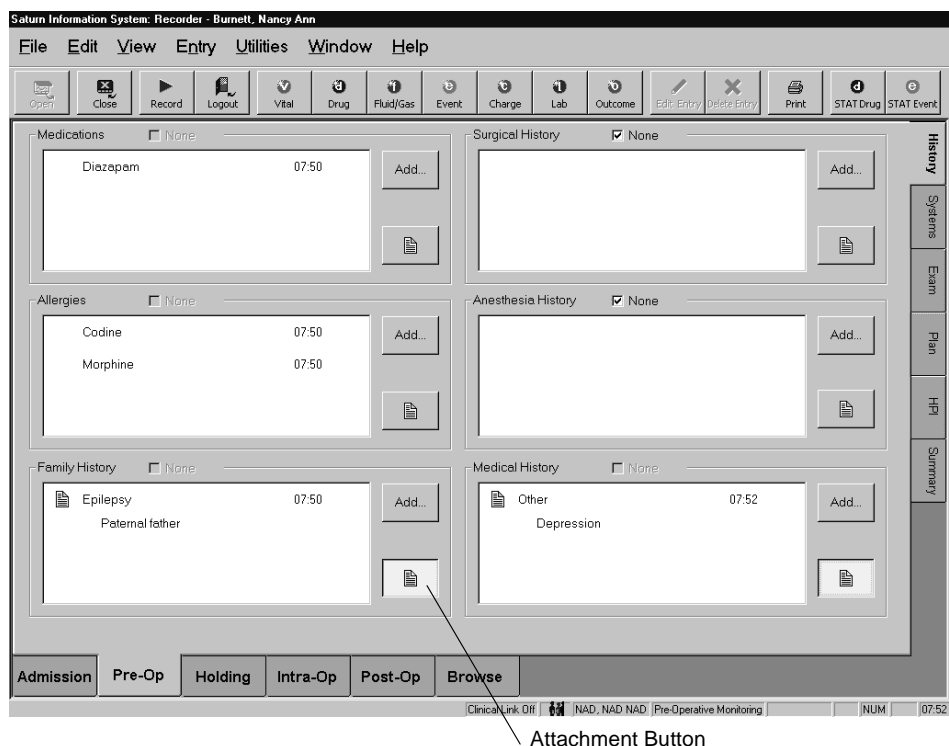
Figure 15. Pre-Op Section, History Page

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Prerequisite   The Pre-Op section tab must be selected.

Procedure   Follow this procedure to enter patient historical data.

1. Select the History tab. The History page appears (Figure 15 on page A-20).

2. Press the Add button in any of the areas where you want to add patient historical data to the patient's case. The corresponding Add dialog box appears. The Add Medications dialog box is shown in Figure 16.
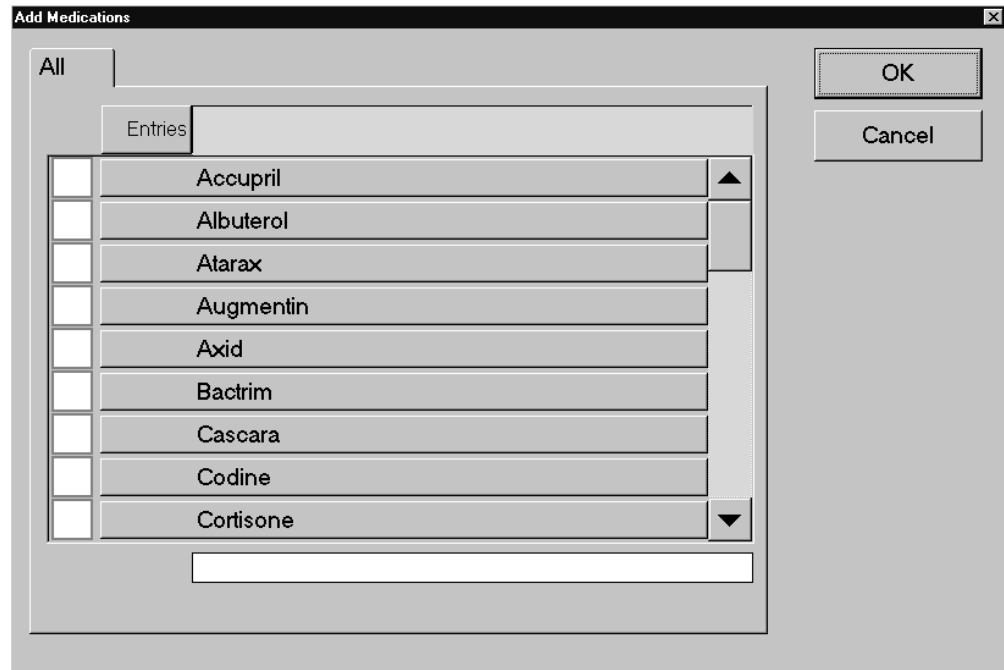
Figure 16. Add Medications Dialog Box

3. Select items in the Add dialog box by selecting the check boxes. Refer to "Speed Search" on page 2-17 for finding items quickly.

    Note: To deselect a check box, clear it by selecting it again.

4. After you select the check boxes, you can change the time and date and other data in the dialog box. Next, add remarks by doing one of the following:

    • If using a touch screen or a mouse, tap or click on the name of the item you checked (not on the check box, though). The Add Entry dialog box for the item appears (Figure 17 on page A-22).

    • If using the keyboard, press the ENTER key when you finish selecting check boxes. Then highlight the item in the History page window and press the ENTER key. The Add Entry dialog box for the item appears (Figure 17 on page A-22).

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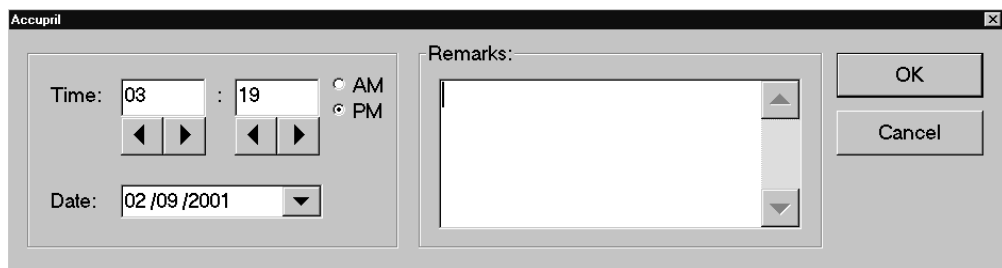
Figure 17. Add Entry Dialog Box (for the medication Accupril)

5. Type the date, or press the arrow in the Date box and select the date from the calendar.

6. Type any remarks about the item in the Remarks text box.

7. Select the time by inserting the pointer in each Time box (the one on the left is for hours, the one on the right is for minutes) and typing it in. Or, press the arrows beneath each Time box until the correct time appears. Then select the AM or PM option button (if there is one).

8. Press the OK button. An Attachment icon appears next to the item in the list if you entered remarks. Refer to "Attachment Buttons" on page 2-33 for viewing, editing and deleting comments.

9. To delete an item in any window, select it and then press the Delete Entry button on the toolbar; or press the DELETE key. Select Yes when prompted to delete it.

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Systems Page   The Systems page allows you to add or delete patient data related to the patient's systems prior to surgery. You can click the WNL or N/A check box to indicate "Within Normal Limits" or "Not Applicable." See Table 6-2 on page 6-11 for a description of options on the Systems page.

Prerequisite   The Pre-Op section tab must be selected.

Procedure   Follow these steps to enter patient systems data.

   1. Select the Systems tab. The Systems page appears (Figure 18).
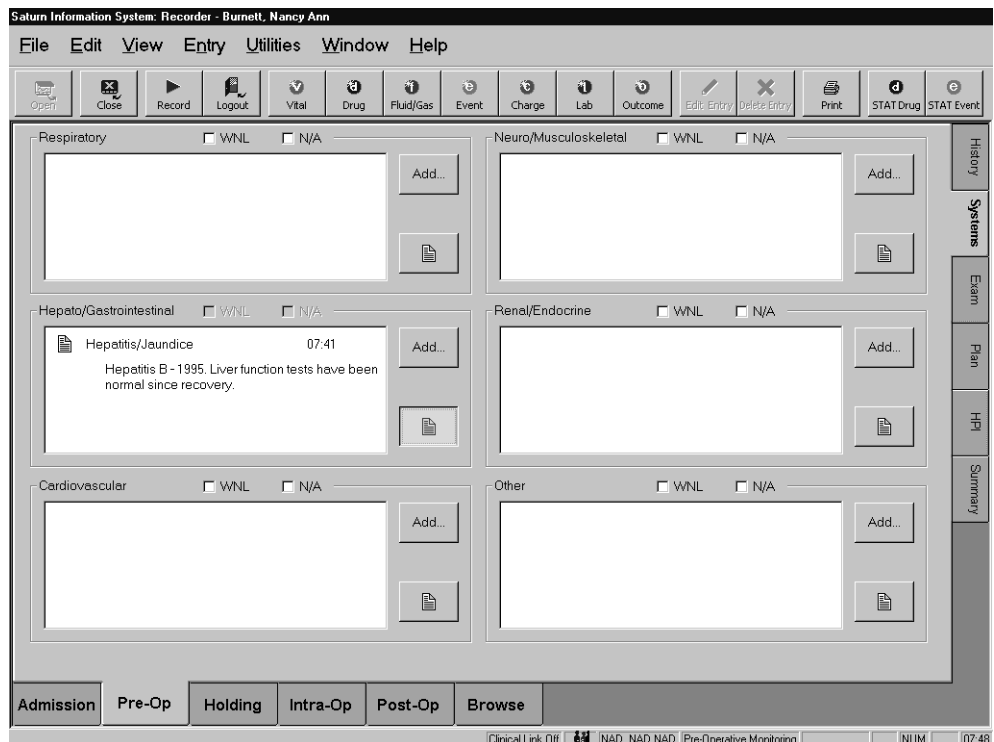
Figure 18. Pre-Op Section, Systems Page

   2. Press the Add button in any of the areas where you want to add systems data to the patient's case. The corresponding Add dialog box appears. Select items in each of the areas according to the same basic steps outlined in "History Page" on page A-20.

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Exam Page   The Exam page allows you to enter and view information, such as the patient's hearing, visual and speech impairments, that were gathered during the patient's medical exam prior to treatment or surgery. You can select check boxes and option buttons that apply to the patient as well as enter comments in the text boxes. Labs and vitals are displayed in the grid area of the screen. A triangle icon in the upper right corner of a grid cell means that remarks are attached to it. See Table 6-3 on page 6-15 for a description of options on the Exam page.

Prerequisite   The Pre-Op section tab must be selected.

Procedure   Follow these steps to enter patient exam data.

1. Select the Exam tab. The Exam page appears (Figure 19).

Figure 19. Pre-Op Section, Exam Page

2. Select all check boxes and option buttons that apply to the patient.

3. Type any additional information in the text boxes.

4. Add any labs or vitals information using the Lab and Vital buttons. Or, add them by selecting Vitals and Labs from the Entry menu.

   The data you add appears in the Labs & Vitals grid on the Exam page. Refer to "Adding Lab Entries" on page 13-2 and "Adding Manual Vital Entries" on page 14-2 for more information.

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Plan Page   The Plan page allows you to view the medical plan formulated and reviewed by the attending physicians and other administrative and clinical personnel involved in the case. See Table 6-4 on page 6-21 for a description of options on the Plan page.

Prerequisite   The Pre-Op section tab must be selected.

Procedure   Follow these steps to enter patient anesthesia plan data.

1. Select the Plan tab. The Plan page appears (Figure 20).

Figure 20. Pre-Op Section, Plan Page

2. Do one of the following:

   • Insert the pointer in the Pre-Op Date box and type the month, day and year (eight digits).

   • Or, select the down arrow key in the Pre-Op Date box. A calendar appears (Figure 21 on page A-26). If the month and year are correct, click the day on the calendar. The date you select now appears in the Date box.

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Figure 21. Pre-Op Section, Date Calendar on the Plan Page

Note: To select a date in a future month, click the arrow to the right of the calendar heading. To select a date in a previous month, click the arrow to the left of the calendar heading. Then click the day on the calendar. The date you select now appears in the Date box.

3. Select the arrow in the ASA Physical Status and the Anticipated Postoperative Care lists, and then select an item in each list.

4. Select any items in the Process Verification window that have been completed.

5. Type any comments in the Remarks window, as needed.

6. In the Discussed Anesthesia Plan area, select the Edit button. The Select Anesthesia Type(s) dialog box appears. Make selections, then press the OK button.

7. Repeat step 6 to add items to the Information Obtained By, the Anesthesiology Review, or the Surgeon Review areas.

   Note: To remove an item from the window, select it and press the Delete Entry button on the toolbar or the DELETE key.

8. If a staff signature is required to add or delete staff names, refer to "Electronic Signatures" on page 2-34.

HPI (History of Present Illness)

The HPI (History of Present Illness) tab lets you enter up to 4,000 characters of free-form text related to the history of the patient's present illness. Data is entered by typing on the keyboard.

Prerequisite

The Pre-Op section tab must be selected.

Procedure

Follow these steps to view, add or change history of present illness (HPI) data.

1. Press the HPI tab. The HPI page appears (Figure 22).
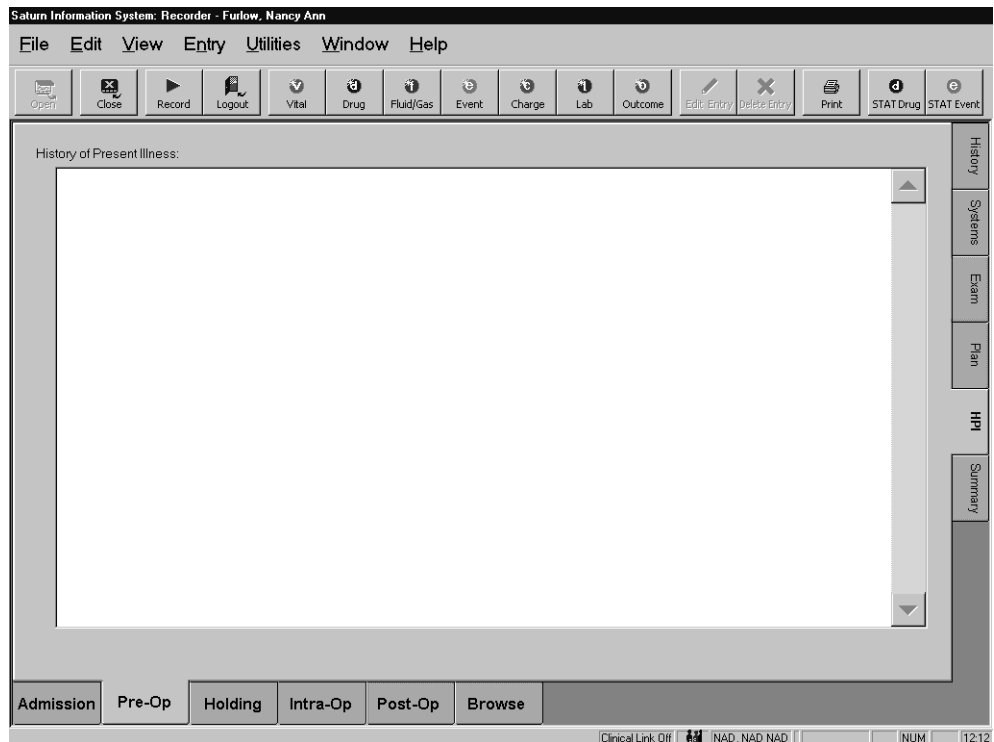
Figure 22. Pre-Op Section, HPI Page

2. Type the history of present illness information.

- To delete text, use the BACKSPACE key. Or, select text and then press the DELETE key.

- To begin a new paragraph (carriage return), press CTRL+ENTER.

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Pre-Op Summary   The Summary page allows you to view a summary of manually entered data gathered during the preoperative period. The Filters area of the screen lets you limit the list of data in the window by clearing the check boxes of the data sets you do not want included. As many check boxes can be selected as needed. See Table 6-5 on page 6-26 for a description of options on the Pre-Op Summary page.

Prerequisite   The Pre-Op section tab must be selected.

Procedure   Follow this procedure to view patient summary data.

1. Press the Summary tab. The Summary page appears (Figure 23).
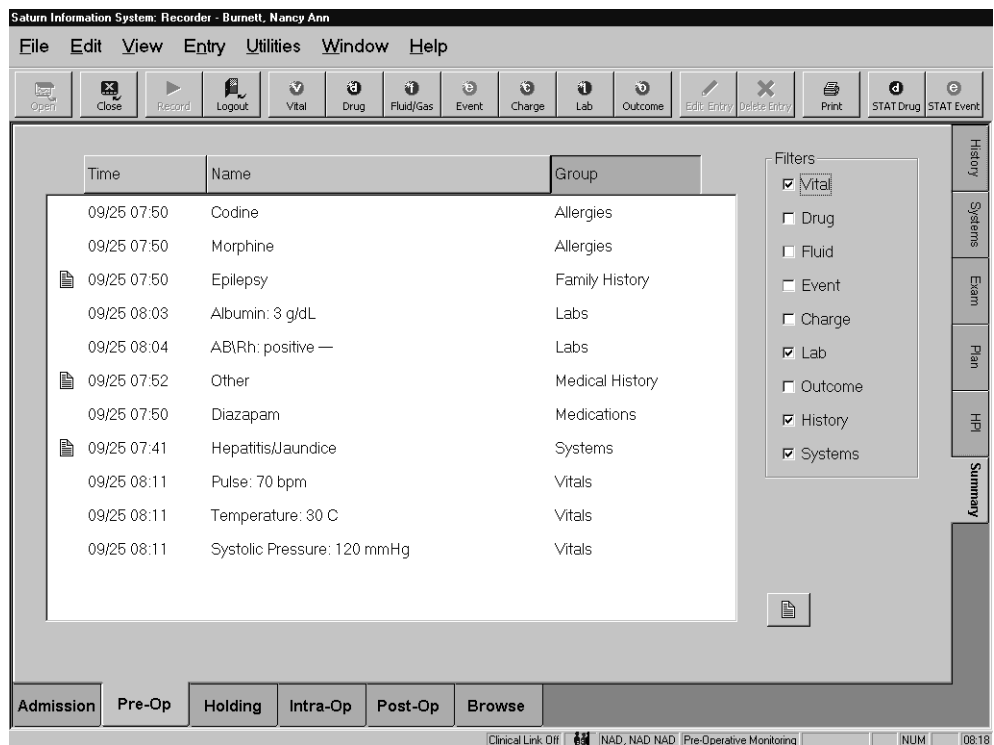
Figure 23. Pre-Op Section, Summary Page

2. In the Filters area, select one or more categories of data to be viewed (Vitals, Drugs, etc.) by selecting the check boxes. Select as many categories as you want. To clear a check box, click it again; the check is removed.

   Example: Figure 23 shows a list of all vital, lab, history and systems data in the case so far. To view other data as well, select more check boxes. To view a single category of data, clear all the check boxes except the one you want listed in the window.

3. To sort the data in the window, do one or more of the following:

   • Click the Time header to list the items chronologically.

   • Click the Name header to list the items alphabetically.

- Click the Group header to list the items according to their category or group (vitals, drugs, fluids, etc.).

4. To change items in the Summary page, double-click an item in the list and make the changes to the dialog box. Then press the OK button.

   Note: To change only the time of an entry, select the item and then click or press its date/time in the Time column. Two arrows appear beneath the date and time (refer to Figure 6-15 on page 6-24). Click the left arrow to select an earlier time (decreases by one minute); click the right arrow to select a later time (increases by one minute). When you are finished, click or press elsewhere on the screen. The new time appears in the time column, and the arrows fade from view.

5. See Table 6-5 on page 6-26 for a description of options on the Pre-Op Summary page.

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Entering Holding Data

You use the Holding section of Recorder to enter and edit holding data as well as view summary data gathered during the presurgical phase.

Prerequisite
- The case must be open.
- Holding must be selected in the Workstation Type list on the Utilities menu.

Procedure   Follow this procedure to enter, edit and view data while a patient awaits surgery.

1. Press the Holding tab at the bottom of the Recorder window, then press the Chart tab.

   –Or–
   On the View menu, choose Holding and then Chart.

   –Or–
   On the keyboard, press ALT V, H, C.

   The Holding section Chart appears (Figure 24).
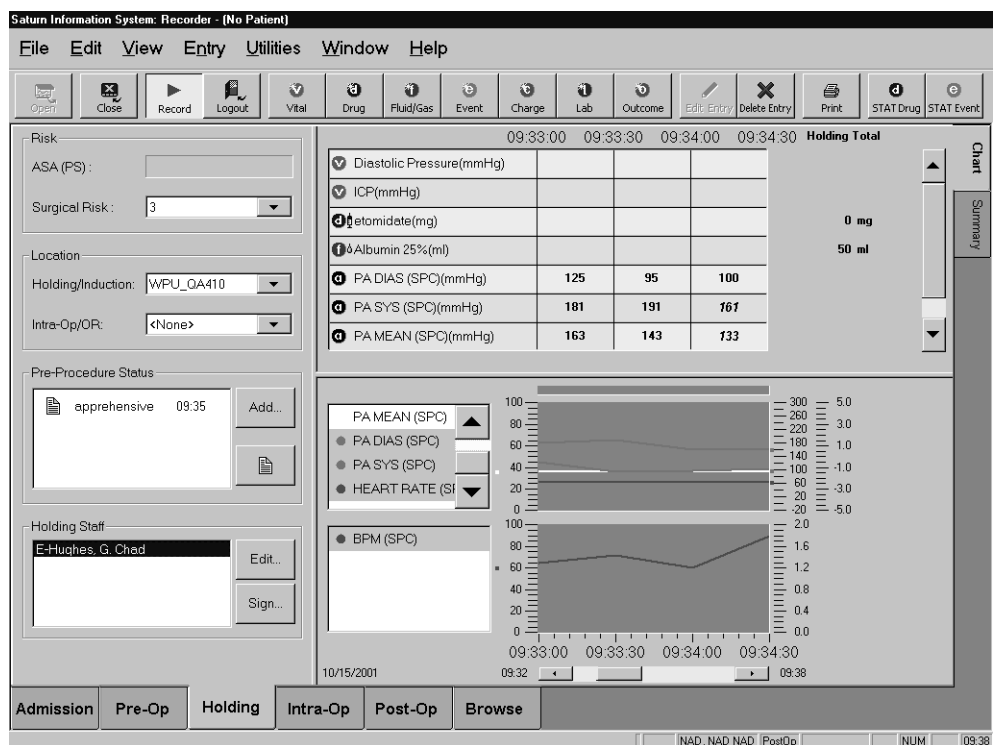
Figure 24. Holding Section, Chart

2. Press the Record button. Refer to "Recording a Case" on page A-13 for more information.

3. Select items in the Surgical Risk, Holding/Induction, and Intra-Op/OR lists.

4. Select items in the Pre-Procedure Status and Holding Staff windows according to step 6 under "Plan Page" on page A-25.

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5. To add items to the Holding record while it's recording, refer to "Adding Items to a Case" on page A-19.

6. The options you selected on the Holding page of the Case View Settings dialog box will be displayed in the grid and graph sections of the Chart. To make changes, select Case View Settings from the View menu and then choose the Holding tab. Refer to "Changing General Display Parameters" on page A-11 for more information.

Fluid Balance

The optional fluid balance grid can be displayed in the lower portion of the grid area on the Holding Chart by selecting the Fluid Balance check box on the Holding tab in the Case View Settings dialog box. Refer to "Changing General Display Parameters" on page A-11 for more information.

The fluid balance grid consists of four rows (all values are converted and displayed in milliliters (ml)):

- The first row displays the *fluid in* totals for the chart.
- The second row displays the *fluid out* totals for the chart.
- The third row displays the balance totals for the chart (*fluid in* minus *fluid out*)
- The fourth row displays the overall (Peri-Op) balance total.

Refer to "Fluid Balance" on page 11-15 for complete details.

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Holding Summary

The Summary page allows you to view a summary of manually entered data gathered during the Holding period. The Filters area of the screen lets you control the list of data in the window by clearing the check boxes of the data sets you do not want displayed. Select as many check boxes as needed. See Table 7-2 on page 7-11 for a description of options on the Holding Summary page.

Prerequisite

The Holding section tab must be selected.

Procedure

Follow this procedure to view patient summary data.

1. Press the Summary tab. The Summary page appears (Figure 25).
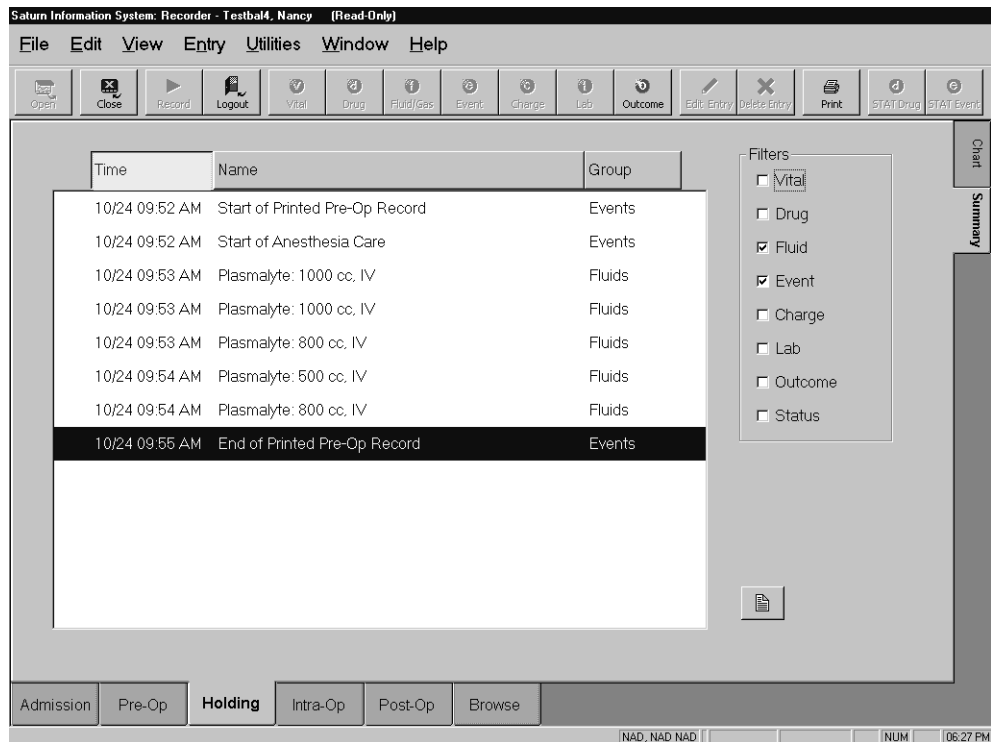
Figure 25. Holding Section, Summary Page

2. Refer to "Pre-Op Summary" on page A-28 for a review of the Summary page features and how to use them.

Entering Intra-Op Data

The Intra-Op section lets you record, edit and view data collected during surgery.

Prerequisite
- The patient's case must be open.
- Intra-Op must be selected in the Workstation Type list on the Utilities menu.

Procedure
Follow these steps to enter, edit and view case data during surgery.

1. Press the Intra-Op tab at the bottom of the Recorder window, then press the Chart tab.

   –Or–
   On the View menu, choose Intra-Op and then Chart.

   –Or–
   On the keyboard, press ALT, V, I, C.

   The Intra-Op section Chart appears (Figure 26).
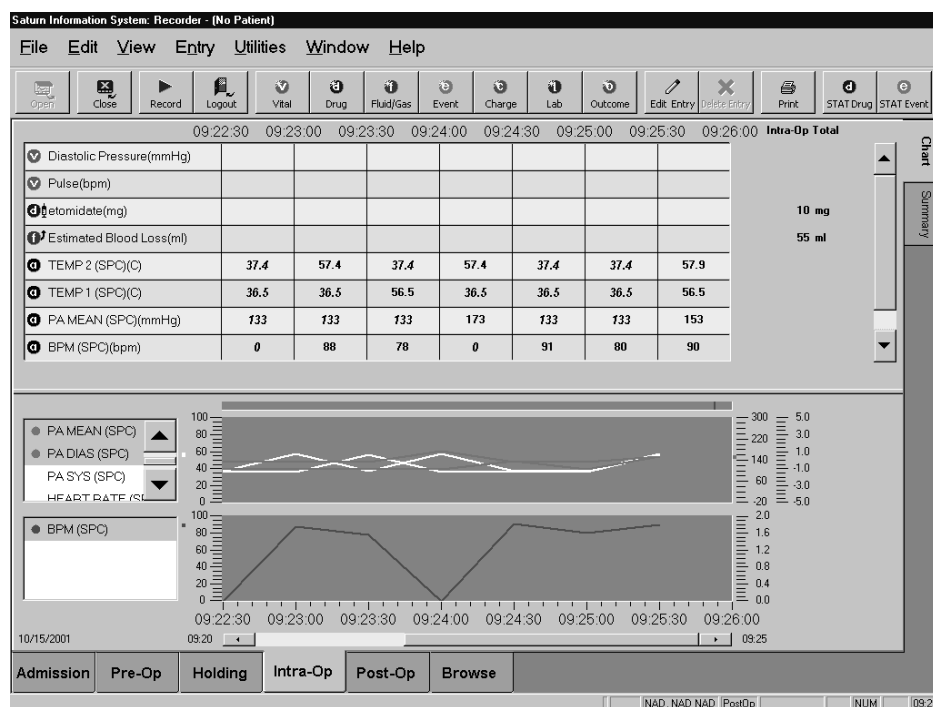
Figure 26. Intra-Op Section, Chart

2. Press the Record button. Refer to "Recording a Case" on page A-13 for more information.

3. To add items to the Intra-Op (anesthesia) record while it's recording, refer to "Adding Items to a Case" on page A-19.

4. The options you selected on the Intra-Op page of the Case View Settings dialog box will be displayed in the grid and graph sections of the Chart. To make changes, select Case View Settings from the View menu and then choose the

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Intra-Op tab. Refer to "Changing General Display Parameters" on page A-11 for more information.

Note: The optional fluid balance grid can be displayed in the lower portion of the grid area on the Intra-Op Chart. Refer to "Fluid Balance" on page A-31 for details.

Intra-Op Summary

The Summary page lets you view a summary of manually and automatically entered data gathered during the Intra-Op period. The Filters area of the screen lets you control the list of data in the window by clearing the check boxes of the data sets you do not want displayed. Select as many check boxes as you want. See Table 8-2 on page 8-7 for a description of options on the Intra-Op Summary page.

Prerequisite

The Intra-Op section tab must be selected.

Procedure

Follow these steps to view patient summary data.

1. Press the Summary tab. The Summary page appears (Figure 27).
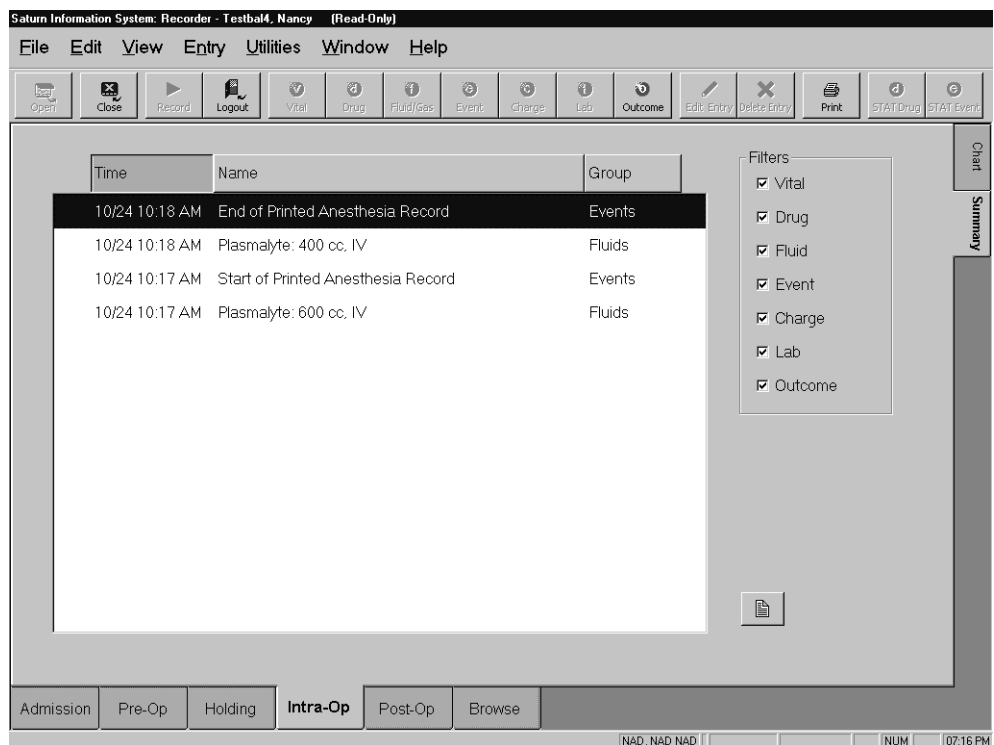
Figure 27. Intra-Op Section, Summary Page

2. Refer to "Pre-Op Summary" on page A-28 for a review of the Summary page features and how to use them.

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Entering Post-Op Data

The Post-Op section lets you create a complete record of postoperative data, such as the patient's vital signs and other postanesthetic conditions.

Prerequisite
- The patient's case must be open.
- Post-Op must be selected in the Workstation Type list on the Utilities menu.

Procedure Follow these steps to enter, edit or view postoperative data.

1. Press the Post-Op tab at the bottom of the Recorder screen, and then press the Chart tab.

   –Or–
   On the View menu, choose Post-Op and then Chart.

   –Or–
   On the keyboard, press ALT V, T, C.

   The Chart page of the Post-Op section appears (Figure 28).
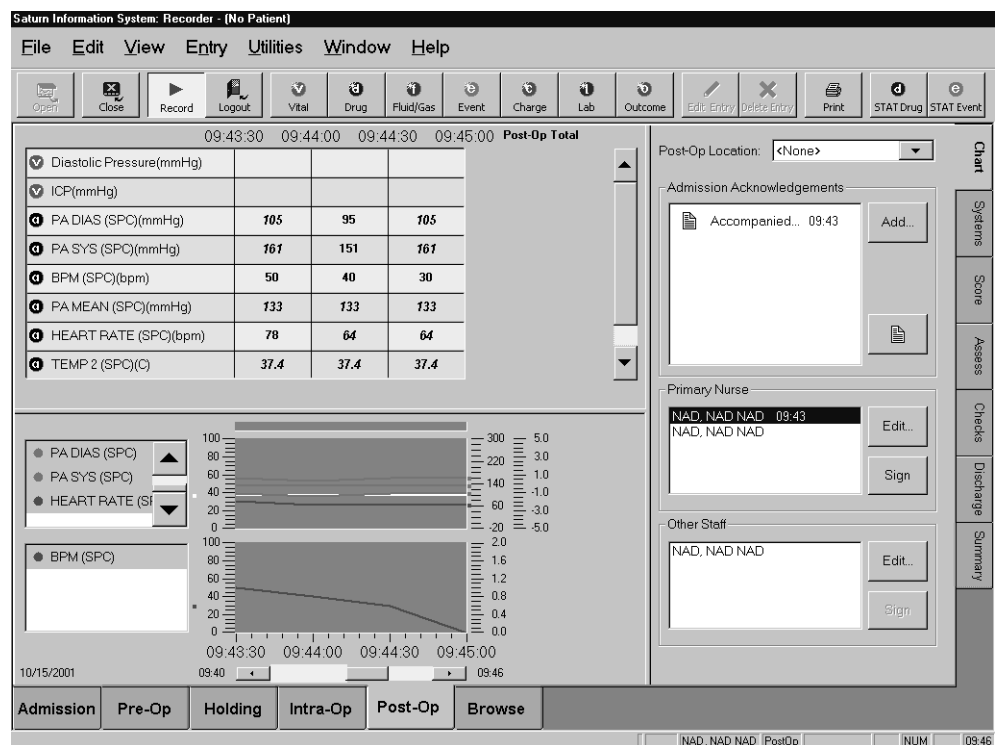
Figure 28. Post-Op Section, Chart

2. Press the Record button. Refer to "Recording a Case" on page A-13 for details.

3. To add data items to the Post-Op record while it's recording, refer to "Adding Items to a Case" on page A-19.

4. Select items in the Admission Acknowledgements, Primary Nurse, and Other Staff windows according to step 6 under "Plan Page" on page A-25.

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5. The options you selected on the Post-Op page of the Case View Settings dialog box will be displayed in the grid and graph sections of the Chart. To make changes, select Case View Settings from the View menu and then choose the Post-Op tab. Refer to "Changing General Display Parameters" on page A-11 for more information.

Note: The optional fluid balance grid can be displayed in the lower portion of the grid area on the Post-Op Chart. Refer to "Fluid Balance" on page A-31 for details.

Systems Page The Systems page allows you to enter the results of a postoperative review of systems. (This page functions exactly like the Pre-Op Systems page.) The Systems page has six windows where you add or delete patient data related to the patient's systems after surgery. Table 16-2 on page 16-11 defines the Systems page options.

Prerequisite The Post-Op section tab must be selected.

Procedure Follow these steps to enter patient postoperative systems data.

1. Select the Systems page tab. The Systems page appears (Figure 29).

Figure 29. Post-Op Section, Systems Page

2. Press the Add button in any of the areas where you want to add systems data to the patient's case. The corresponding Add dialog box appears. Select items in each of the areas according to the same basic steps outlined in the "History Page" on page A-20.

Score Page   The Score page allows nursing staff to record acuity measures for postoperative recovery scoring. In compliance with standards, a postoperative recovery score of 0 or higher must be obtained prior to patient discharge.

Your system administrator has preselected any items that appear on the Score page using the Environment Manager program. Score items will appear only if an environment is loaded. For more information, see "About Loading Environments" on page 4-3.

Prerequisite   The Post-Op section tab must be selected.

Procedure   Follow these steps to enter patient postoperative score data.

1. Press the Score page tab. The Score page appears (Figure 30).

Figure 30. Post-Op Section, Score Page

2. Press the Record button. Refer to "Recording a Case" on page A-13 for details.

3. To add items to the Post-Op record while it's recording, double-click or press an item in the grid. (Or, select (highlight) a score item and press the Edit Entry button on the toolbar.) The Score Entry dialog box associated with the scoring item appears. Select the Time, Date and Status in the boxes. Type important notes and information in the Remarks text box (up to 2,048 characters). A triangle icon appears in the upper right corner of a grid cell when you add remarks to a score entry.

4. Press the OK button to save the entry.

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Assess Page   The Assess page allows you to record and view postoperative physical assessments.

Your system administrator has preselected any items that appear on the Assess page using the Environment Manager program. Assess items will appear only if an environment is loaded. For more information, see "About Loading Environments" on page 4-3.

Prerequisite   The Post-Op section tab must be selected.

Procedure   Follow these steps to enter patient postoperative assessment data.

1. Press the Assess page tab. The Assess page appears (Figure 31).

Figure 31. Post-Op Section, Assess Page

2. Press the Record button. Refer to "Recording a Case" on page A-13 for more information.

3. To add items to the Post-Op record while it's recording, double-click or press an item in the grid. Or, select (highlight) an assessment item and press the Edit Entry button on the toolbar. The Assessment Entry dialog box appears for the item you selected. Select the Time, Date and Status in the boxes. Type important notes and information in the Remarks text box (up to 2,048 characters). A triangle icon appears in the upper right corner of a grid cell when you add remarks to an assess entry.

4. Press the OK button to save the entry.

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Checks Page   The Checks page is an extension of the assessment process, where nurses can document the results of specific recovery assessments.

Your system administrator has preselected any items that appear on the Checks page using the Environment Manager program. Checks items will appear only if an environment is loaded. For more information, see "About Loading Environments" on page 4-3.

Prerequisite   The Post-Op section tab must be selected.

Procedure   Follow these steps to enter patient postoperative checks data.

1. Press the Checks page tab. The Checks page appears (Figure 32).

Figure 32. Post-Op Section, Checks Page

2. Press the Record button. Refer to "Recording a Case" on page A-13 for more information.

3. To add items to the Post-Op record while it's recording, double-click or press an item in the grid. (Or, select (highlight) an item and press the Edit Entry button on the toolbar.) The Checks Entry dialog box appears. Select the Time, Date and Status in the boxes. Type important notes and information in the Remarks text box (up to 2,048 characters). A triangle icon appears in the upper right corner of a grid cell when you add remarks to a checks entry.

4. Press the OK button to save the entry.

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Discharge Page

The Discharge page lets you document the discharge process, including continuation of care, any special instructions, the level of the patient's awareness, and the staff members involved in the discharge process. Table 16-3 on page 16-22 defines the Discharge page options.

Prerequisite

The Post-Op section tab must be selected.

Procedure

Follow these steps to enter patient postoperative discharge data.

1. Press the Discharge page tab. The Discharge page appears (Figure 33).

Figure 33. Post-Op Section, Discharge Page

2. In the Evaluation of Plan of Care, the Instruct Family/Patient In, and the Transfer Summary windows, select the Add button. The corresponding Add Discharge dialog box appears. Select items in each of the areas according to the same basic steps outlined in the "History Page" on page A-20.

   Note: To edit the staff lists in the Staff area, press the Edit button. The Select Staff dialog box appears. Add or delete names. To remove an item from the window, select it and press the Delete Entry button on the toolbar or the DELETE key.

3. If a staff signature is required to add or delete staff names, refer to "Electronic Signatures" on page 2-34.

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Post-Op Summary

The Summary page lets you view a summary of manually entered data gathered during the postoperative period. The Filters area of the screen lets you limit the list of data in the window by clearing the check boxes of the data sets you do not want included. As many check boxes can be selected as you like. See Table 16-4 on page 16-26 for a description of options on the Post-Op Summary page.

Prerequisite

The Post-Op section tab must be selected.

Procedure

Follow these steps to view patient summary data.

1. Press the Summary tab. The Summary page appears (Figure 34).
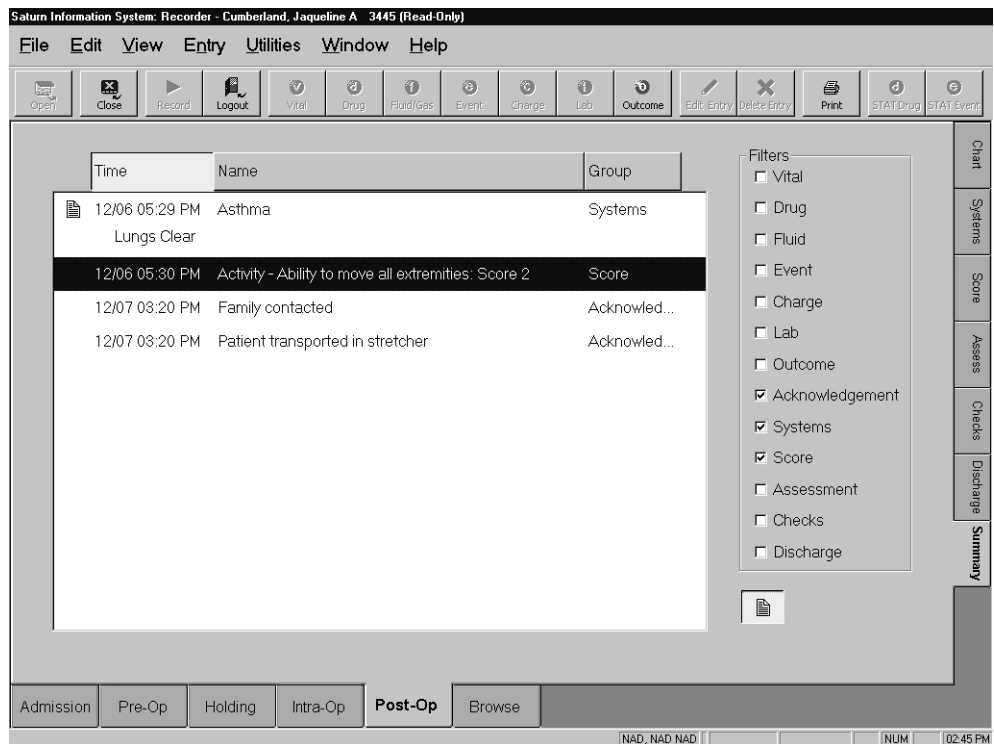
Figure 34. Post-Op Section, Summary Page

2. Refer to "Pre-Op Summary" on page A-28 for a review of the Summary page features and how to use them.

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Editing Data

While viewing any Chart, you can change data for any item listed on the grid.

The following procedure provides general instructions for editing data on a Chart. For more information about this and other methods of editing a particular type of data, consult the section of this manual that discusses that type of data:

- "Editing Drug Entries" on page 9-11
- "Editing Event Entries" on page 10-13
- "Editing Fluid/Gas Entries" on page 11-9
- "Editing Outcome Entries" on page 12-7
- "Editing Lab Entries" on page 13-8
- "Editing Manual Vital Entries" on page 14-7
- "Editing Charge Entries" on page 15-6.

Procedure　　Follow this procedure to edit data.

Note: In place of steps 1 and 2, double-click the cell and proceed to step 3.

1. Select the grid cell that contains the data you want to edit.

2. On the toolbar, press the Edit Entry button.

   –Or–
   On the Edit menu, choose Edit Entry.

   A dialog box for the selected cell appears.

3. If the dialog box has tabs at the top, press the tab that corresponds to the dose or entry you want to edit.

   Note: Tabs appear when the time interval you select on the grid contains more than one entry.

4. Complete the information in the dialog box and then press the OK button.

   The case record is updated. The grid may also be updated, depending on the changes you made.

Deleting Data

While viewing a Chart, you can delete data that is displayed on the Chart grid as long as the data is not automatically recorded data.

The following procedure provides general instructions for deleting data on a Chart. For more information about this and other methods of deleting a particular type of data, consult the section of this manual that discusses that type of data:

- "Deleting Drug Entries" on page 9-14
- "Deleting Event Entries" on page 10-14
- "Deleting Fluid/Gas Entries" on page 11-12
- "Deleting Outcome Entries" on page 12-8
- "Deleting Lab Entries" on page 13-11
- "Deleting Manual Vital Entries" on page 14-10
- "Deleting Charge Entries" on page 15-7

Procedure   Follow these steps to delete data.

1. Select the grid cell that contains the data you want to delete.

2. On the toolbar, press the Delete Entry button.

   –Or–
   On the Edit menu, choose Delete Entry. One of the these messages appears:

   A Recorder confirmation message appears for single entry deletions (Figure 35). Select YES or No.
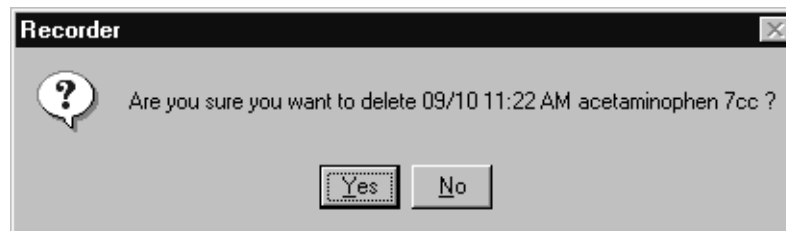
Figure 35. Single Entry Delete Dialog Box (Example)

   A Delete dialog box appears for multiple entry deletions containing a checklist of the entries in the cell (Figure 36).
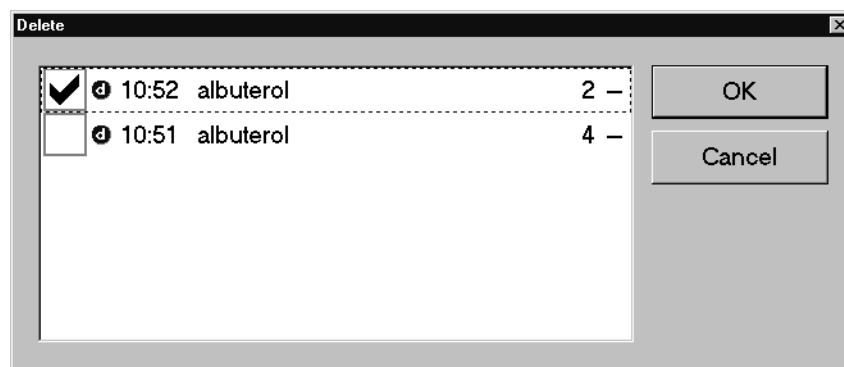
Figure 36. Multiple Entry Delete Dialog Box (Example)

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3. Do one of the following:

- Press the Yes button in the Recorder confirmation message to delete the single entry. Press No to escape without deleting.

- Check the entries you want to delete in the Multiple Entry Delete dialog box, then press the OK button to delete one or more entries. Press Cancel to escape without deleting.

Displaying Parameters on a Graph

Every graph in the graphic area is associated with a list of automatically collected data parameters. From this list, you can select which parameters you want to display on the graph.

To display a parameter on a graph, simply select it in the parameter list. The parameter is displayed in the color shown next to its name on the list.

Copying Graph Parameters to the Grid

To see the numerical measurements for a parameter that is graphed, copy the parameter to the grid.

Prerequisite A Chart tab must be selected.

Procedure Follow this procedure to drag a parameter from the graph to the grid.

Before You Begin: Make sure the parameter is not already displayed on the grid. You cannot copy a parameter to the grid if it is already there.

1. Drag the parameter from its parameter list in the graphic area toward the grid area. As you drag the parameter, its category symbol moves on the display.

2. When the category symbol is between the grid rows where you want to insert the parameter, drop it.

A copy of the parameter is added as a new row on the grid. (The original parameter remains on the graph. Select the item's row heading to redisplay the graph.) A value for each time interval sampled is inserted in the appropriate grid cell. Future values are added as they occur.

Note: There can be multiple entries in a cell. However, the entry with the latest time is displayed in the cell.

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Stopping Case Recording

When you want to finish recording automatically collected data (i.e., data selected in the Automatic Data Settings dialog box from the Case View Settings option on the View menu), you must press the Record button to stop recording.

Prerequisite   A case must be recording.

Procedure   Follow these steps to stop recording automatically collected data for a case.

1. On the toolbar, press the Record button.

   –Or–
   On the File menu, choose Record.

   –Or–
   On the keyboard, press ALT, F, R or CTRL+R.

   A confirmation message appears (Figure 37):

Figure 37. Stop Recording Dialog Box

2. Press the Yes button to stop recording.

   The following occurs:

   - Case data is no longer recorded.

   - The `RECORDING` message is removed from the status bar.

   - An End of Printed Record event is placed on the Summary page.

   - An End of Printed Event marker is placed on the Event bar on the Chart page (Holding, Intra-Op and Post-Op sections).

   - If an End of Printed Event or event marker already exists from a previous stopping of anesthesia, then the original anesthesia stop time changes to the new anesthesia stop time.

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Changing the Stop Record Time

You can change the stop record time to a later time in the event you stopped recording too soon (i.e., before the patient was disconnected from the monitors), and you need to include the data collected in the buffer after you stopped recording. Refer to "Editing Event Entries" on page 10-13 to change the stop record time to a later time, and then follow the procedure below to transfer the data from the buffer into Recorder.

Note: You can also change the stop record time to an earlier time (if you continued to record after the patient was disconnected from the monitors) so that you can exclude data that does not belong in the case. You may notice data on the Chart that does not belong in the case. Refer to "Editing Event Entries" on page 10-13 to change the stop record time to an earlier time. Any buffer data that follows the new time you enter will be excluded from the case.

Prerequisite

The case must be recording (press the Record button). Be sure to transfer data before you stop recording or end the case, otherwise the data in the buffer will be lost.

Procedure

Follow these steps to load buffer data into Recorder:

1. On the Edit menu, choose Rollback. (If no data exists, Rollback is dimmed on the Edit menu.) If data exists in the buffer, a screen resembling Figure 38 appears:
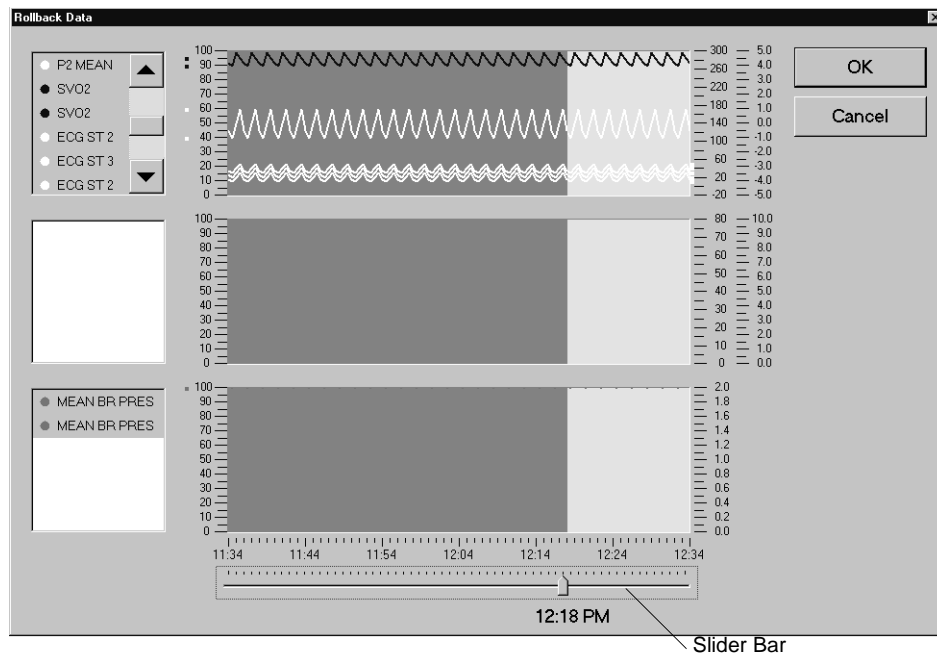
Figure 38. Rollback Data Screen

The slider bar shows a time range beginning with the time the case stopped recording, and ending with the last data recorded (up to one hour).

2. Select and drag the arrow on the slider bar to select the data you want added to the case. The data in the range that you select is highlighted. Data on the graphs outside the area you highlight will not transfer to Recorder.

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3. Press the OK button. The data you selected is loaded into the Recorder application, and the stop record event time is changed to the rollback stop time.

Note: Repeat steps 2 and 3 if you missed any data you want to add to the case.

Closing a Case

When you are finished working with a case, you should close it. Closing a case prevents others from entering information into the case record.

Note: Items without entries are deleted when a case is closed. For example, if you select a drug, but you do not enter a dose in the Add Drug Entry dialog box, the drug is removed when you close the case. However, unfinished STAT entries remain in the case.

Closing a case does not mean that you cannot re-enter it and record data in the case later. However, check with your system administrator to determine how long after a case is closed that it can be edited.

Note: Refer to Table 19-1 on page 19-5 if messages appear when you close a case.

Prerequisite It is recommended that the Last name box or the Medical Record box in the Patient area of the Demographics page of the Admission section be completed.

Procedure Follow this procedure to close a case:

1. On the toolbar, press the Close button.

   –Or–
   On the File menu, select Close.

   –Or–
   On the keyboard, type ALT, F, C.

   If either of the patient name or medical record number is incomplete when you try to close the case, you are prompted to enter a name or number (Figure 39).
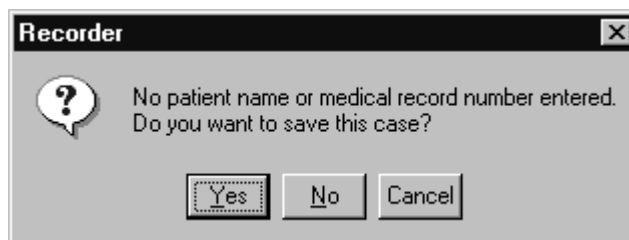
Figure 39. Close Case Dialog Box

2. Select one of the following options from the Close Case dialog box:

   • Yes - Pressing the Yes button saves and closes the case without the patient name or medical number.
   • No - Pressing the No button does not save the case and it does not appear in the Open Case window if it was a new case.
   • Cancel - Pressing the Cancel button does not save the case, but leaves the case open for you to continue entering and recording data.

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Recorder also prompts if required events are missing (Figure 40 on page A-48).
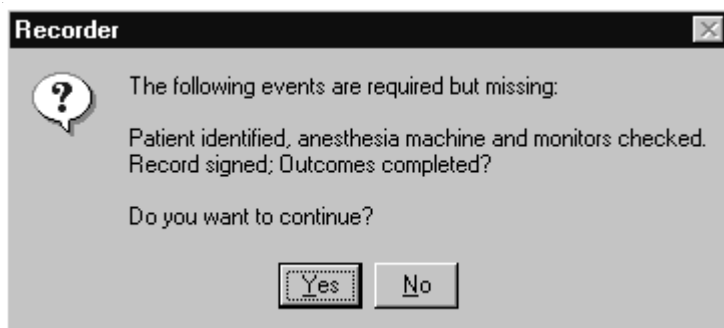
Figure 40. Events Missing Dialog Box

3. Select one of the following options from the Close Case dialog box:

- Yes - Pressing the Yes button closes the case without including the required missing events.
- No - Pressing the No button does not close the case. You can go back and fill in the missing data before you close the case.

Note: If you press the Yes button, a message will appear when the case is reopened that describes the missing required boxes. See "System Configuration Required Fields Page" on page 3-8 for more information.

When the case is closed, the Main window appears.

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Printing

There are three ways to print a report:

- Using the Print option on the File menu
- Using the Print Preview option on the File menu
- Using the Print button on the toolbar

Using the Print Option

You can select, deselect, preview, and print one or more reports from the Print dialog box. You can also select a different number of copies than the number configured.

Note: Refer to Table 20-5 on page 20-20 if messages appear while attempting to select, preview or print a report.

Prerequisite

The case for which you want to select, preview and print reports must be open.

Procedure

1. To access the Print dialog box, follow the procedure for the input device you are using:

Touch Screen — Tap the File menu and then tap Print.

Mouse — Click the File menu and then click Print.

Keyboard — Type ALT, F, P (or CTRL+P) to select Print from the File menu.

The Print dialog box appears (Figure 41).

Figure 41. Print Dialog Box

2. To preview a report before you print it, press the Print Preview button and refer to step 2 in "Using the Print Preview Option" on page A-51. Or, continue to the next step.

3. Do one of the following:

- To print the default reports (i.e., the reports configured in the Workstation Configuration option on the Utilities menu), press the OK button. The reports are printed. Or,

- To select reports other than those configured, or to select a different number of copies than is configured, press the Reports button. The Select Reports dialog box appears (Figure 42 on page A-50). Complete the remaining steps in this section.

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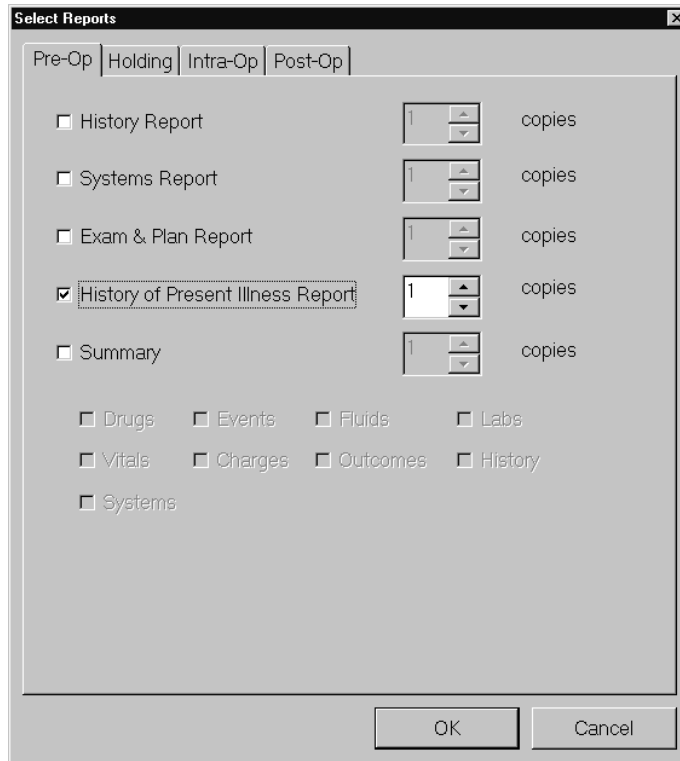
Figure 42. Select Reports Dialog Box (Pre-Op tab shown)

4. Select a section tab (Pre-Op, Holding, Intra-Op or Post-Op) at the top of the dialog box. A list of reports for that section appears.

5. Select the reports you want to print by clicking the check box next to a report. If you select a Summary report, also select the data you want included on that printed report (i.e., Drugs, Vitals, etc.).

   Note: When you select the Print All option on the Intra-Op tab of the Select Reports dialog box, Saturn prints all records showing data at 30-second intervals. However, you must have administrator privileges to select this option. Even if the Time Scale in the Case View Settings dialog box (selected from the View menu) is set to 30 seconds, the report will show data at 5-minute intervals unless the Print All option is selected.

6. Select the number of copies you want to print for each report by clicking the arrows in the copies box. Or, type the correct number in the copies box.

7. Press OK to save the report selections, or press Cancel to return to the Print dialog box without saving the selections.

   Note: A message appears (Figure 20-5 on page 20-18) if less than 1 copy or more than 99 copies have been selected. You will not be able to preview or print the report until you select a valid number. Press OK, and then repeat the last two steps.

8. Press OK in the Print dialog box to print the reports (and the number of copies) you just selected.

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Using the Print Preview Option

Use the following procedure to preview and print configured reports only. If you print using this option, all configured reports will be printed.

Note: Refer to Table 20-5 on page 20-20 if messages appear while attempting to preview or print a report.

Prerequisite

The case for which you want to preview or print reports must be open.

Procedure

Follow this procedure to preview a report and then print it.

1. To preview a report, follow the procedure for the input device you are using:

Touch Screen	Tap the File menu and then tap Print Preview.
Mouse	Click the File menu and then click Print Preview.
Keyboard	Type ALT, F, V to select Print Preview from the File menu.

The first report configured for your workstation appears on the screen (see Figure 20-1 on page 20-14 and Figure 20-2 on page 20-15).

2. Press one or more of the following buttons at the top of the screen Print Preview screen:

- Press the Print button to print the report(s). All reports configured for your workstation will be printed.

- Press the Next Page button to view the next page of the report. (This button is disabled if there are no more pages.)

- Press the Prev Page button to view the previous page of the report. (This button is disabled if there are no previous pages.)

- Press the Two Page button to display two pages of the report side-by-side on the screen. (If the report is comprised of two pages, the button now changes to One Page.)

- Press the Zoom In button up to two times to enlarge the view of the report. (This button is disabled after pressing it two times.)

- Press the Zoom Out button up to two times to shrink the view of the report. (This button is disabled after pressing it two times.)

- Press the Close button to escape the Print Preview screen without printing the report.

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Using the Print Button or the Keyboard

Use the Print button on the Recorder toolbar — or use the keyboard — if you want to print all configured reports without previewing them or changing the number of copies.

Note: Refer to Table 20-5 on page 20-20 if messages appear while attempting to print a report.

Prerequisite

The case for which you want to print reports must be open.

Procedure

To print all reports configured for this workstation, follow the procedure for the input device you are using:

Touch Screen	Tap the Print button on the Recorder toolbar.
Mouse	Click the Print button on the Recorder toolbar.
Keyboard	Type ALT, F P or CTRL+P. Then press the ENTER key when the Print dialog box appears.

All the reports are printed.

Logging Off from Recorder

When you are finished using Recorder, you should log off. Logging off prevents others from entering information under your user ID.

Prerequisites

No prerequisites apply to this function.

Procedure

Follow these steps to log off from Recorder.

On the toolbar, press the Logout button.

–Or–
On the File menu, choose Logout.

–Or–
On the keyboard, type ALT, F, L.

If a case is open, you are prompted to close the case before logging off. If you do not close the case before logging off, it will remain on the screen and will be opened automatically to the next person who logs on. Other messages may also appear.

After you respond to all messages, Recorder logs off and displays the Recorder Logon dialog box so that the next user can log on.

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Exiting from Recorder

If you are at a nonclinical workstation, you can use the Exit function to simultaneously log off from Recorder and return to Windows NT.

If you are at a clinical workstation, you cannot close or exit from the Recorder program, but you can restart the workstation.

Prerequisite   All cases must be closed. See "Closing a Case" on page 19-4 for more information.

Procedure   Perform the following procedure to exit from Recorder (nonclinical workstations only), or to restart the workstation (clinical workstations).

Do one of the following:

- At a *nonclinical* workstation, select Exit from the File menu. Recorder logs off the application and returns you to Windows NT.

    Note: If a case is open, you are prompted to close the case before logging off. Other messages may also appear, which you must respond to before you are logged off.

- At a *clinical* workstation, select Exit from the File menu. The Exit dialog box appears (Figure 43).

Figure 43. Exit Dialog Box (Clinical Workstation)

Select Yes to restart the workstation. Recorder closes all applications that are running and restarts the workstation after you are prompted.

Select No to keep the Recorder application open.

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B

Appendix B: Quick Reference Guide

This section provides abbreviated instructions for getting you around the Saturn Recorder application. It is recommended that you refer to the individual sections for complete instructions and the index for further information regarding the contents of this guide.

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Saturn Software Version 4.0 Quick Reference Guide

Task	Steps	Notes & Warnings
Log On	• Enter **User Name** and **Password**. • Press **OK**.	
Check Workstation Type	• Tap **Utilities Menu** then **Workstation Type**. • Select a workstation type (Pre-Op, Holding, Intra-Op, Post-Op).	• A case cannot be open while choosing workstation type. • Unavailable types are dimmed on menu.
Begin a Case	• Press **Open** on Toolbar; press **Filters** to determine case list; select existing case from list. Or, select **New Case** on **File** menu. • Press **Record** when patient positioned and monitors applied. *Press* **Record** *again to stop recording*. • If you forget to start recording, press **Record** now, then go to **Edit>Rollback**. Scroll back to load the missed data.	*Caution:* Failure to press **Record** button may result in loss of automatically recorded data. (See second bullet below.) • The **Record** button starts *and stops* the recording of data. • Up to one hour of data can be restored (using **Edit>Rollback**) if monitors were on during lapsed time. Also the Start Record Time on the Summary page can be changed. See "Changing the Start Record Time" in Section 4 of the "Recorder User's Guide" for instructions.
EMERGENCIES	• Press **Record** button. • Use **STAT Drug** and/or **STAT Event** to capture important times.	• **STAT Drug** and **STAT Event** marks the time/date, but not the specifics. Go back and use **EDIT Entry** button on toolbar to enter specifics for these drugs or events. *Caution:* Be sure to open the patient case immediately, otherwise these STAT entries may end up in the wrong case.
CCOW Patient Context Manager	• Tap **Utilities Menu** then **Clinical Context**. • Select **Break** or **Rejoin Clinical Link**. • If the latter, select **Global Data** (record selected in other program) or **this Application's Data** (record selected in Recorder).	• The **CCOW Enabled Workstation** option must be selected on the General page of the Workstation Configuration option of the Utilities menu.
ADMISSION (Enter & Read data)	• Press **Admission** section tab at bottom of screen.	• Admission has two pages: **Chart** and **Summary**. • Page tabs are located on right side of Recorder screen.
PRE-OP (Enter & Read data)	• Press **Pre-Op** section tab at bottom of screen.	• Pre-Op has five page tabs: • **History, Systems, Exam, Plan, HPI,** and **Summary**. • Page tabs are located on right side of Recorder screen. • Enter data in **Admission** section if given those security rights.
HOLDING (Enter in Holding type station only; Read all others)	• Press **Holding** section tab at bottom of screen.	• Holding has two page tabs: **Chart** and **Summary**. • Page tabs are located on right side of Recorder screen.

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Task	Steps	Notes & Warnings
INTRA-OP (Enter in Intra-Op station only; Read all others)	• Press **Intra-Op** section tab at bottom of screen.	• Intra-Op has two page tabs: • **Chart** and **Summary**. • Enter data in **Admission** and **Holding** sections if given those security rights.
POST-OP	• Press **Post-Op** section tab at bottom of screen.	• Post-Op has seven page tabs: • **Chart, Systems, Score, Assess, Checks, Discharge** and **Summary**. • Enter data in **Admission** sections if given those security rights.
Adding Data	• On toolbar, press button for type of data you want to add (**Vital**, **Drug**, etc.). • Complete the dialog box that appears. • Press **OK**.	•
Editing Data	• Select grid cell that contains the data. • Press **Edit Entry** button on toolbar. • If dialog box has multiple entry tabs, select entry tab you want to edit and make changes. • Press **OK**.	• You can edit data on the Summary page. Double-click or press the item to be edited. • Make changes in the dialog box. • Press **OK**.
Deleting Data (manually entered data only)	• Select grid cell that contains the data. • Press **Delete Entry** button on toolbar. • Select **Yes** to deletion message.	• You can delete data on the Summary page. Double-click or press the item to be edited. • Select **Yes** to deletion message.
Add Remarks	• In the **Remarks** area of any Entry dialog box (except when entering an Outcome, it is the **Resolution** box), type important notes.	• A Comment icon (small triangle) appears in the grid cell of a **Chart,** and the grid cells on Score, Assess and Checks pages in **Post-Op** section.
Displaying Parameters on a Graph	• Locate parameters list on left hand side of graph. • Select parameter according to your input device.	•
Copying Graph Parameters to a Grid	• Touch and drag the parameter from the list toward the grid. • Release when parameter is in position.	•
Ending a Case	• Select **Record** button on toolbar to stop recording. • Do one of the following: • Select the **Print Preview** on the **File** menu to preview a report before you print it. (Then select the **Print** button in the Print Preview window to print it.) • Select the **Print** button on the toolbar. • Select the **Print** option on the **File** menu. Complete the Print dialog box, then press **OK**.	• It is highly recommended that patient name and/or medical record number be entered before a case is closed. However, you may bypass the prompt. *Caution:* Pressing **Record** button (to stop recording) before patient is disconnected from monitors may result in loss of automatically recorded data. (See below.) • Up to one hour of data can be restored (using **Edit>Rollback**) if monitors were on during lapsed time. Also, the Stop Record Time on the Summary page can be changed. See "Changing the Stop Record Time" in Section 18 of the "Recorder User's Guide" for instructions.
Closing the Case and Logging Out	Press **Close** button on toolbar. Press **Logout** button on toolbar.	• **Respond to "missing data" prompts.** • **Logon dialog appears for next user.** • **If case is open at logout, electronic signature option provided in logon dialog box.**

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